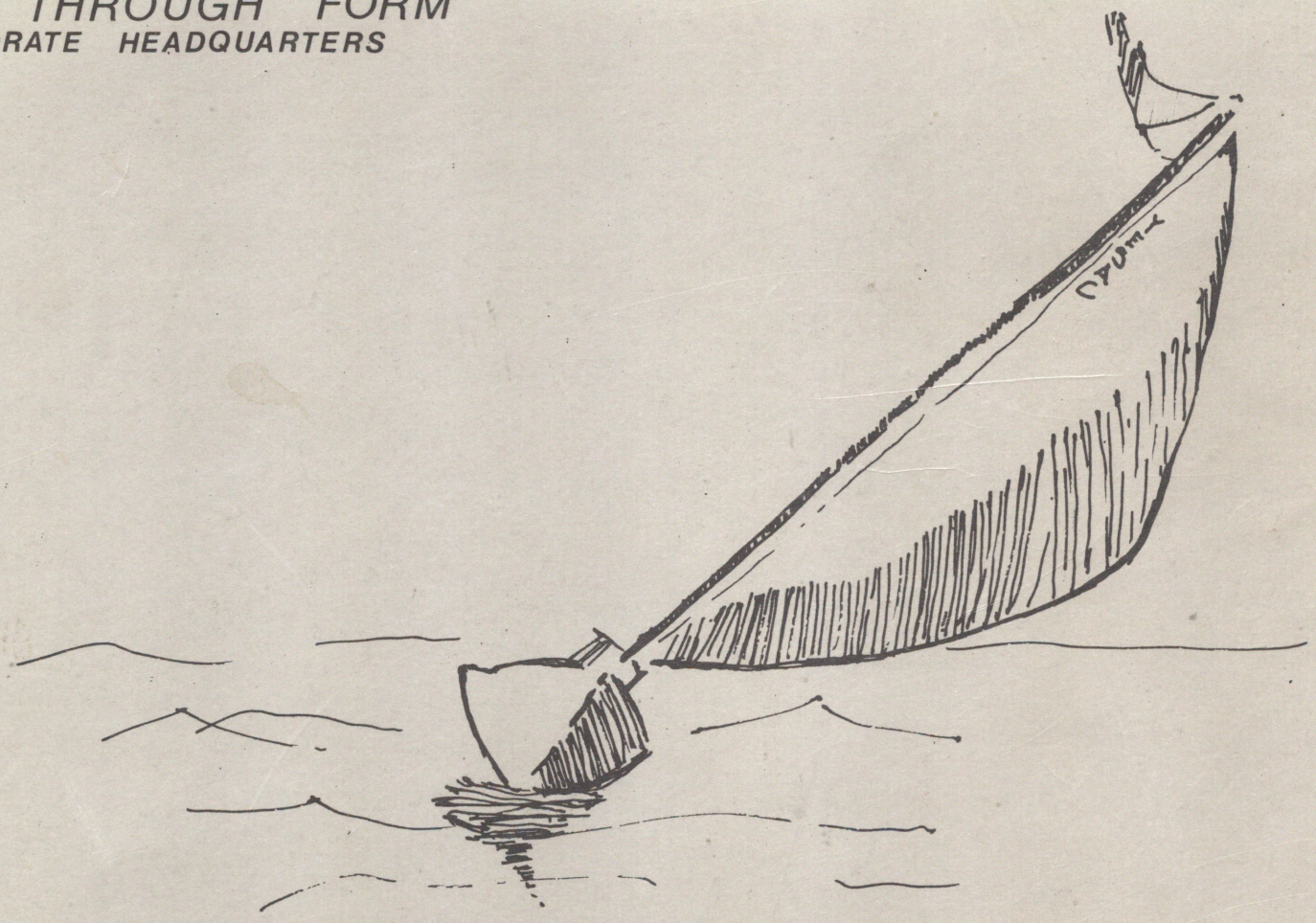
# IMAGE THROUGH FORM
## A CORPORATE HEADQUARTERS



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The boy stood on the mountain
he gazed into the couloir

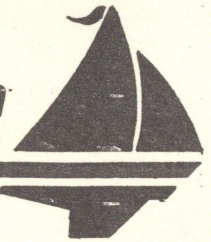
Fear crept into his body
he jumped with his second breath

The flight seemed timeless
he could not see, for fear had blackened his mind

The landing has not yet come
he did not fall

Fear was in the air
the boy escaped it.





# IMAGE THROUGH FORM

A Corporate Headquarters

by

Tim Casey

A thesis submitted in partial fulfillment
to the requirements for the degree

of

Bachelor of Architecture

Approved:

| | |
|---|---|
| Date | Thesis Advisor |
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MONTANA STATE UNIVERSITY
Bozeman, Montana

June 1985

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Signed: Tim Casey
Tim Casey

Date: 6/14/85
June 1985

FOR MOM AND DAD-

Without your guidance and support

my dream would not have been realized.

I love you both.

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## PROBLEM STATEMENT

The problem that I propose to do for my thesis project is to design a corporate headquarters for a hypothetical sailboat company. The main emphasis of the project will be to establish an image or corporate identity through architecture and architectural forms for the public eye and for the corporation itself.

The site I have chosen is in my hometown, Burnsville, Minnesota, a suburb south of Minneapolis.

INTRODUCTION

I would like to open this book with a brief introduction on what I am doing and thinking. For me, thesis is a time to collect all my thoughts and feelings. I plan to use my book as a beginning, not an end. There is no way a person can have a complete understanding of such a diverse subject as architecture in five years of school. Architecture involves many varied aspects of life. An architect must deal with such practical issues such as environment, structure and business, as well as the more abstract issues such as philosophy, art and theory. As Jusuch Koh stated in a recent issue of "Progressive Architecture" - architects "know too little about too much."

Upon my graduation in the school of architecture, I am sent out to face the real world armed only with raw facts and ideas which I have gathered and hopefully retained. I feel as

if I have only scratched the surface of such an exciting profession. In no way do I consider myself an expert because I have now obtained a degree. Instead, I found that the more I learned the more I need to learn. What this book and project are going to do is to help me collect my thoughts and apply them. I have always been interested in how a person who is not schooled in architecture views architecture and how architecture may shape his life. I have picked a topic which deals with how a building may be shaped, and how that shape will affect the viewer.

## WHAT IS A CORPORATE IDENTITY?

A corporate identity can have different meanings to different groups of people. For the people in public relations it may mean newsletters, annual reports, and community relations. For the people in advertising it may involve developing the identity through ads, brochures, billboards and the like. To an architect, a corporate identity is symbolized through the structure and facade of his design. The common unifying element running through all the meanings is to project an image to the public. This is accomplished through planned and unplanned verbal and visual elements which are derived from the corporate body and leave an impression on the observer.[1]

All corporations, whether large or small, have an image. When we think of corporations such as BMW, Ferrari or Ford, images pop into our heads which relate to each corporation. This

image may be one of good/bad, high tech, or simply the building that the corporation is housed in. In each case, the companies have made either a verbal or visual statement to the world, giving us information on how they would like to be perceived. Even though they may produce the same goods, a different image may come to mind. The secret of a successful identity system is one which visually separates and distinguishes a firm from its competitors.[2]

Obviously all corporations would like to maintain a good corporate image to the public. When a corporation is able to portray a favorable image to the public, it finds life a little easier and probably more profitable. In a study done by Batten, Banton, Durstine and Osborne, it was found that when a company has a good image, the public is more likely to assume that it produces good products, is more likely to pay more for a company's products, and try their new products. It was also found that the public is likely to take the company's side in disputes and is more likely to consider the company's stock when a good corporate image is upheld.[3]

A planned corporate identity should reflect and communicate the planned management policies. When a corporation is planning an identity, the management would decide on items such as whether to build an image of high or low profile, high tech or handmade, and build these images into their buildings and marketing strategies.

## CORPORATE BUILDING HISTORY

The corporate headquarters is a relatively new type of building. Before the industrial revolution there was no need for even an office building. Most office space was contained in a back room of the merchant's home. As the industrial revolution began, goods were limited by inefficient machines. The distribution of the goods were limited by poor roads, vehicles to carry them in, and lack of communication systems. The business end was fairly uncomplicated and therefore no real need of much office space. When the first factories were built, it was easy to find room for office space in the back of the factory. The management was kept busy trying to invent new and faster methods of production, thus did not deal much with the aspect of an office building. As modern conveniences, transportation and communication developed, the products were able to start selling at a national level.[4]

Sales picked up and management needed a separate office to handle the functions of a growing business.

The earliest office buildings were very rough, being built basically of masonry and wood. The structures rose barely over six stories and contained a few thousand square feet to meet the needs of the employees. The only indication of the business inside was the owner's name placed on the main facade in raised letters.[5]

With the 19th century technology, businesses grew again. Economic reasons gave business leaders such as Morgan, Carnegie and Rockefeller a chance to expand again. Places such as Chicago and New York offered the leaders just what they were looking for. In both places, products could be shipped out by railroad and sea. Telephone lines were strung which made it easier to communicate to each other. The complexity of the businesses demanded a high quality business

environment. New York and Chicago had it all to offer. As businesses grew, so did the land values.

The key to the problem of rising land values came at the turn of the century. With the ability to produce high quality steel in large quantities and the invention of a safe elevator system, man was able to build up instead of out. Businesses were able to beat the high cost of land by stacking floors on top of each other.

In 1889, Chicago claimed the first sky-scraper. The Monadnock Building by Daniel Burnham and John Root reached the amazing height of sixteen stories. Entrepreneurs, realizing that building heights were fascinating to the viewer, started to build up. Figuring they could capitalize, corporations competed with each other to see who could claim the world's tallest building. Early in the twentieth century impressive buildings began to sprout up such as the Singer Building (1908 - 621'), Woolworth Building (1913 - 792'), Metropolitan Life Insurance Building (1904 - 700'), Chrysler Building (1931 - 1046'), and the Empire State Building (1931 - 1250').

When building resumed in the 1940's after the depression, a new dimension was added to office buildings. Transportation and communication had been consistently moving out from the city and with it took the public. The suburbs defined the American dream, offering people a single family home and its own section of land. The high quality business services realized the business was in the suburbs and followed the public out of town. By the 1960's all but the poorest citizens moved out of the city. Office buildings soon were needed to satisfy the suburban office workers who preferred to work close to home.



Frank Lloyd Wright's Johnson Wax complex in Racine, Wisconsin and Eero Saarinen's John Deere and Company unit in Moline, Illinois gave people their first look at what a suburban office complex would look like. The suburban office sites enabled companies to spread out on their own plot of land as well as to get outside of the city's taxable limits.

The choice between a city or suburban site depended mostly on which would benefit the company the most. Suburban complexes were springing up all over the place, but the city was not forgotten. In the city, architects were redefining the skyscraper and producing notable works such as the Seagram Building and the John Hancock Building. Into the seventies, buildings began to vary from the norm. Architects and business leaders were designing building forms for no apparent reason other than for the novelty of it and to be recognized.[6]

"One of life's most fulfilling moments occurs in that split second when the familiar is suddenly transformed into the dazzling aura of the profoundly new... These breakthroughs are too infrequent, more uncommon than common; and we are mired most of the time in the mundane and trivial. The shocker: What seems mundane and trivial is the very stuff that discovery is made of. The only difference is our perspective, our readiness to put pieces together in an entirely new way and to see patterns where only shadows appeared just a moment before."

Edward B. Fundamen
Thinking in Future Tense

# THE THEORY

## CAN A BUILDING COMMUNICATE?

To communicate is to make known, to have and interchange a series of ideas through a system of sending and receiving. In order to communicate there must be a sender, receiver and a message. Everyday people communicate ideas to each other through spoken or written words. In each case the sender and receiver are able to understand each other because they have a code, a set of rules which are agreed upon in order to translate the message. As long as there is a sender, receiver, and a message, it would be possible to communicate an idea through any cultural system such as art, film, music or architecture.

Buildings do send messages. Sometimes these messages are so complex that they cannot be understood, or so simple that they are not noticed. All buildings communicate to us. The impression that a building leaves on you after viewing it, in a sense, has just communicated a

meaning to you. This impression may be more apparent in one than in others. A skyscraper, for instance, may impress someone before a single family home. The impression is simply a "gut" feeling or attitude towards the building. Each building leaves an impression on each person.

People use buildings everyday to live in, work in, and play in. Architecture belongs to the realm of everyday like just like rock music and ready to wear clothing. It is not set apart like serious music and high fashion. Architecture, in most cases, is a taken for granted object. Many people don't realize what the building is saying to them. Take for instance an office or a bedroom. They are both rooms which are probably used everyday. Because we use them everyday, not much conscious thought is applied to the room. Subconsciously we may think of it in such terms as cold, boring, stark, lively or cheerful. So this sub-conscious

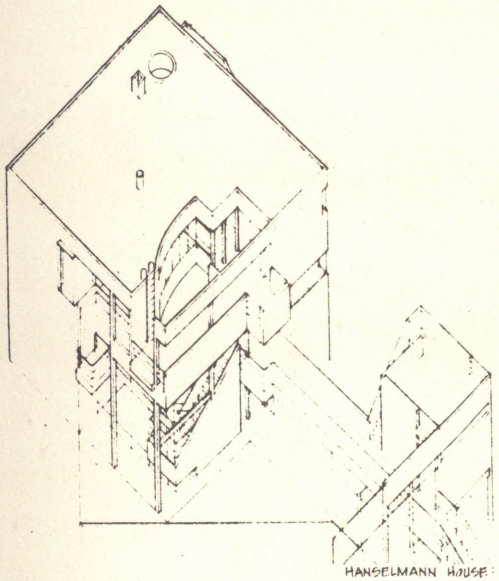
impression left by each room or building may in some sense be communicating a feeling, meaning or idea to us.

With this, any object has the possibility of communicating an idea. In analyzing architecture, one would find that the building is the sender of the message and the person viewing it would be the receiver. But what is the message? The message lies in the building's form, space, volumes and surfaces. According to Umberto Eco, these elements could be considered the signifiers. The signifiers give the viewer clues and hints concerning the building and what it is to mean. The signifiers are based on the signifieds. The signifieds can be just about any idea or set of ideas the owner wants to communicate to the viewer.[7] The signifieds give the signifiers clues as to which forms may be used to establish the idea. For instance, what form (signifier) would one use to establish ideas

such as wealth, power, luxury, function, or commercial goals?

To take the idea that a building communicates a message to us a step further, we may be able to say a building can communicate a symbolic meaning to us. If form, space, volume and surface are the signifiers of an intended meaning or idea (signifieds), we may be able to pick forms which are symbolic of that meaning.

Architecture is a three dimensional art. The architect shapes space in such a way as to make it functional for human habitat. Architecture also has the possibility of becoming symbolic as well as functional. By symbolic we mean something that represents something else by association. Symbolism in some cases might be hard to pick up on in a building. Symbolism may be as abstract or as simple as the architect and owner want. Architect Michael Graves fills his buildings with abstract symbols, while others may



HANSELMANN House: Fort Wayne, Indiana 1967 Michael Graves

plainly spell it out as in the case with the Minneapolis Federal Reserve by Gunnar Birkerts. Here Birkerts has taken a direct application of a suspension bridge and put it in a building. Birkerts wanted to create the same excitement on the plaza as when one drives their boat under a bridge. The bridge idea suspends the building above the plaza and allows the community to enjoy the plaza below.



Buildings in some cases house specialized functions The more specialized the function, the more a form can indicate its use. A garage is a more generic building than a nuclear power plant and as such it may be a more generic form. As buildings become more specialized, their forms begin to identify the buildings as such. For example, a corporate headquarters is basically an office building. When a specific company moves in, it takes on a new meaning. The company produces specific products, has special traits and characteristics. Combined, these all give the company an identity. The building then houses a specialized function, and as such it is the building's job to communicate this.

A corporation has two groups of people to communicate to. The first group is itself and its employees. If the corporate image is weak within, it would have problems communicating its

image to the public. The building's features may indicate to the employees that "we care about you." The use of colors, materials and furnishings may reflect the company's overall attitude to anyone who enters the building. The office spaces and conference rooms speak to the users about the quality of the work required and the quality of the product they produce. Added spaces such as recreational rooms, sports facilities and lounges give the employees spaces which help them to get away from their work for a period of time and have shown to improve productivity as a result of them.[8] A feeling of self-respect and respect for the employee is essential to help establish the corporate image. By establishing the image on the inside, the corporation has won half the battle.

The second set of people to communicate to is the public eye. They are important in that what they see may pose a positive or negative

reaction, and they may act accordingly. Whether or not you want the public to notice you may have a great impact on the design. Obviously, a nuclear power plant doesn't want the same recognition as a pogo stick factory, and the buildings will appear accordingly. By being seen favorably in the public eye, it may allow the corporation more freedom around the community, and have a greater impact on sales.

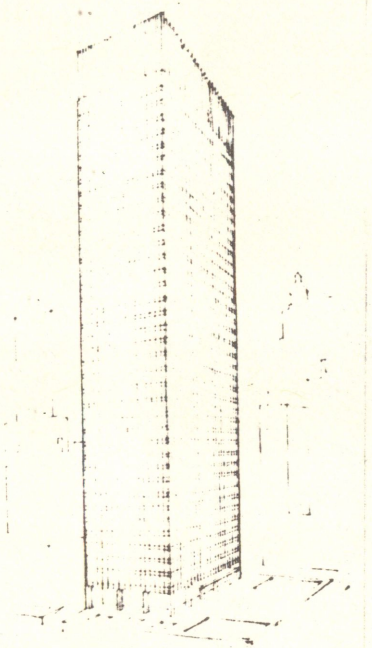
How will the two work together? Hopefully the image the corporation wants to reflect is the same for the employee as for the public eye. The difference is that the public rarely will enter the building and thus only observe it from the exterior. The employee sees both interior and exterior. Both images should appear compatible.

A symbol can be an established symbol, a hidden symbol or a built up symbol. An established symbol is one which has existed for quite some time. The established symbol has an obvious meaning. Anyone looking at it knows exactly what it stands for. The American flag is an example of an established symbol. When one sees the flag they immediately know that it stands for freedom, strength, and pride. There is little dispute over its meaning.

Hidden symbols aren't as obvious. A home, for example, is often overlooked as a symbol. Everyone has a home of some sort, whether it be a condominium, apartment, park bench or a three bedroom colonial with a two car garage. Any home can be identified as a place which a person can call their own. A home offers the individual warmth, security or perhaps just a place which is familiar to them. The above meaning may be

transferred to the form of a house. Thus, the home can take on the symbolic meaning of warmth and security. A house is such a typical item in everyone's life that the symbol may pass without much conscious notice.

The third category is the built up symbol. How do new symbols originate? Symbols are generally not just invented. A new symbol is built up over time, following the adoption and re-use of certain forms and their position with respect to other forms. The system of signification is built up piecemeal, by the introduction of new forms which were based on previous styles and forms.[9] In the 1930's, the international style introduced new forms. A hundred years earlier, the forms of the international style which signified functionalism and flexibility would have had the opposite meaning for the men who followed Pugin's craft based thinking. Mies van der Rohe introduced a new type of structure in the Seagram building, the curtain wall. Mies' curtain wall became by the 1960's the symbol of the office building. It seems logical that as time progresses and with the introduction of new forms that Mies' curtain wall will transform into something else again, perhaps a new style or perhaps a new shape. One can already see this happening with Phillip Johnson's AT&T building in New York.



SEAGRAM BUILDING: New York 1958
Mies van der Rohe and
Philip Johnson

What is the architect's obligation to the corporation and the public when establishing new forms to stand as symbols. In styling the architect could take established functions such as the office building and reclothe it to make it appear new and fresh. The problem with this is that there is no new information content. If the architect were to take the office building and redesign it for a specific company, then it becomes a different object with not only new surface connotations but new connotations in that it now serves an entirely different purpose, one that caters to an individual group instead of just anyone.[10]

The architect is faced with some decisions when designing a form for a specific meaning. One decision is whether to accept society's given norms and established needs and design for them. Another is that the architect may choose to

redesign architecture. He may choose to rid society of all established ideals and give them a new architecture, one which he feels will fit the user better. Or the architect may elect to evaluate the present form of architecture, and create new forms from the ideals of the old.

What happens when you mix symbolic meaning in with function? Take for instance a chair. A chair first tells me I can sit (a subconscious message). If the chair happens to be a throne (conscious message) the function of the chair serves two purposes. One is to be sat in and the other is to establish royalty. Perhaps the throne has a very stiff, straight back and hard seat. It becomes uncomfortable to sit in. Does it still function as a chair or just as a throne?

The same thing holds true for a corporate headquarters. A headquarters should function properly and it should serve as some type of symbol which represents that company best. Where is the fine line between function and symbol drawn? Form always follows function. Once the building is functioning properly then space may evolve around it. However, when laying out the basic functions, keep in mind how the symbolic

meaning can be used to the designer's advantage. For instance, the location of an executive's office is important to the functioning as well as for the symbolism in a building.

BUILT UP SYMBOL = WHOLE

Each element in a building, whether it be a room, a detail or the color, contributes to the overall atmosphere in which the building is to reflect. I feel there should be an overall atmosphere to a building. The overall atmosphere is built up by hints and phrases within the building. The architect is successful if the overall atmosphere can be identified. Each individual element such as windows, colors, and forms are like words. When used in sequence and pattern they make the phrases. When you add phrases you get the chapters which can be identified as the larger sequences in the building. The chapters put together make up the building which reads as the overall atmosphere. At first glance a person viewing the building should sense the atmosphere of the building. As one begins to interact with the building the atmosphere becomes

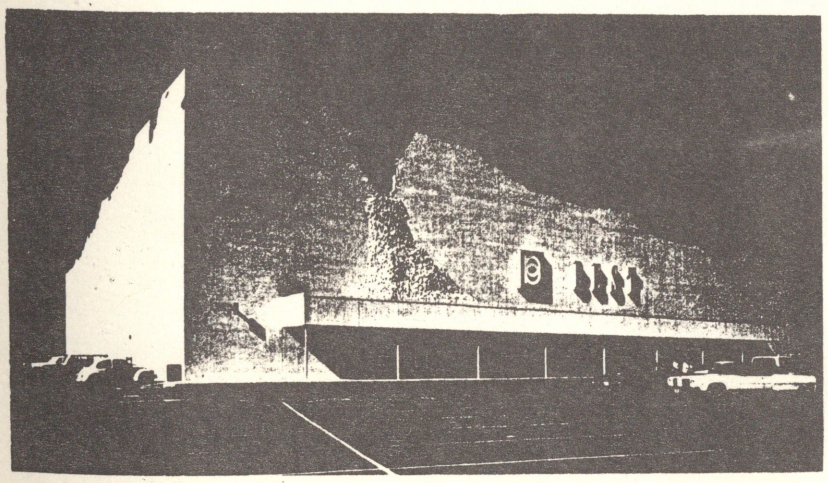
more apparent because they begin to see all the individual parts which make up the whole.

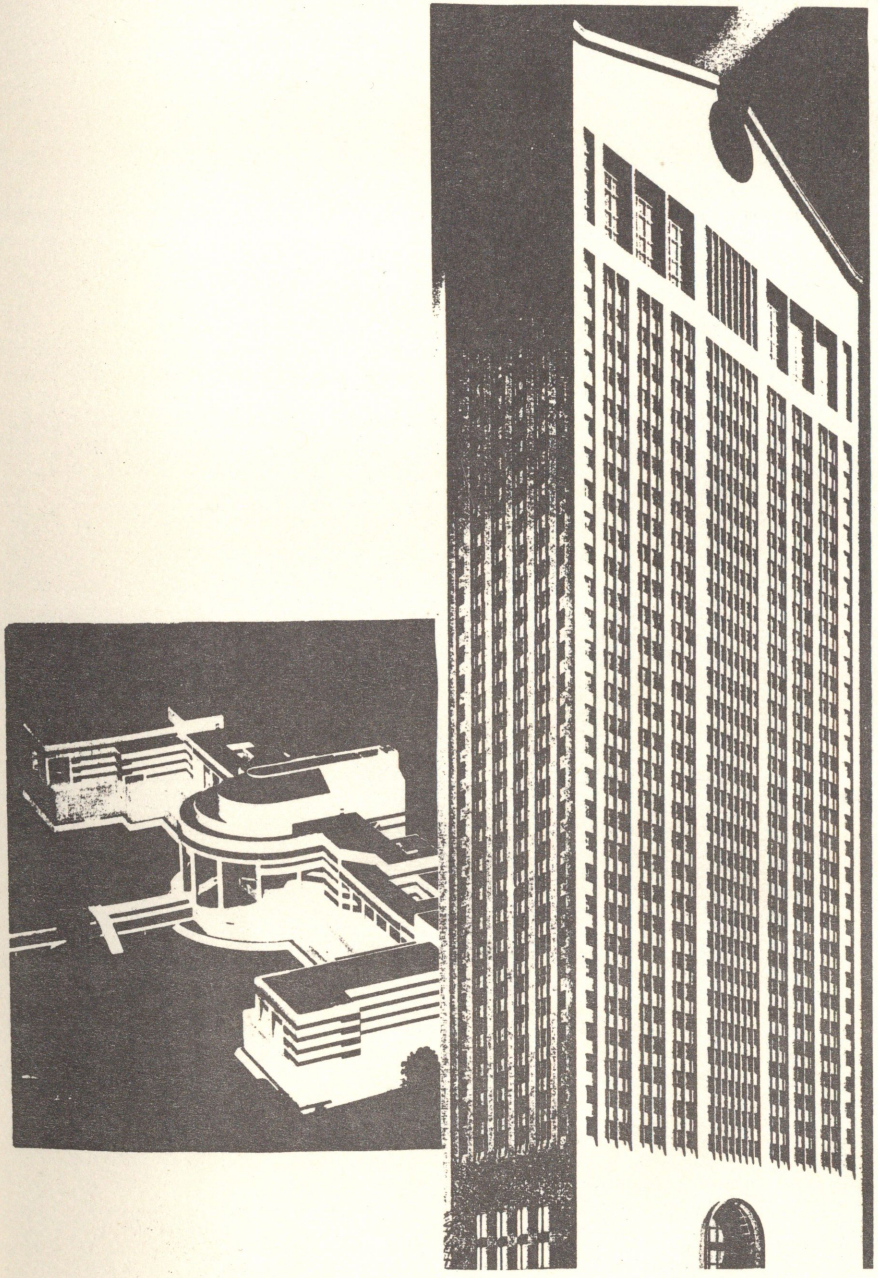
Boiled down, each element holds its own significance. When they are added together, they unite to form one meaning. The elements must be carefully thought out and fit together to read as one. Any element which reads as something other than the intended meaning will detract from the meaning of the building.

There also must be many parts to the building leading to the whole. One piece in a large complex will have difficulty establishing an atmosphere. If an architect wants to portray the "American" ideals in his building, he must look for forms, shapes, colors, etc. which when added together reinforce the intended meaning of American. The architect cannot assume that by simply placing an American flag in front of the building that the building will read as American.

> Some are born with greatness, some achieve it, and others have it thrust upon them. -- Shakespeare

Taking a look at buildings, we find different ways of portraying an identity. How do we want to be seen? Some buildings spit out information at us in an almost comical sense, telling the viewer who they are. Some buildings sit passively on the site gaining our respect through their apparent content. Yet others almost demand respect. In the first case there are buildings such as Best Foods or the buildings shaped like hotdogs. You can't take these buildings seriously. When you look at Best Foods you smile. When you look at the hotdog stand it's obviously a dog. Its apparent meaning is certainly one of humor. The point is that they have established an identity, you know it's them. The second case's example is of General Foods Headquarters in Rye, New York. The building sits





still and somber on the site. You feel at ease with it. Architect Kevin Roche designed a building which makes reference to a home for a company which sells household products. Roche has established an identity for General Foods through symbolic reference of a house in a respectful way. As a result it will be remembered. In the third case we have Phillip Johnson's At&T building. AT&T is a powerful, forceful building which demands respect. From the 60 foot elevated base to the Chippendale pediment, AT&T looms over the viewer like a king would his peasants. As Johnson states, "They are the greatest company in the world, and so they want the greatest headquarters." The power flowing from the building's features establish the image which At&T want to portray.

## CONCLUSION

Buildings do communicate. Sometimes the message is subconscious and sometimes it is conscious. When the message is conscious it can be a message to imply a symbolic representation of an idea which the owner wanted and the architect has given. When communicating an idea in a building, it is important to make sure the user receives the building's message as well as the public. The symbols used to create an idea or establish a meaning can be as broad as the architect's imagination. It is the architect's responsibility to sort through all the ideas and come up with forms which best represent them. The forms the architect picks should have some relevance to the user and to the public. The architect should not create new forms and establish new ordering principles just for the sake of being different. Once the forms have been thought out and ordering principles established,

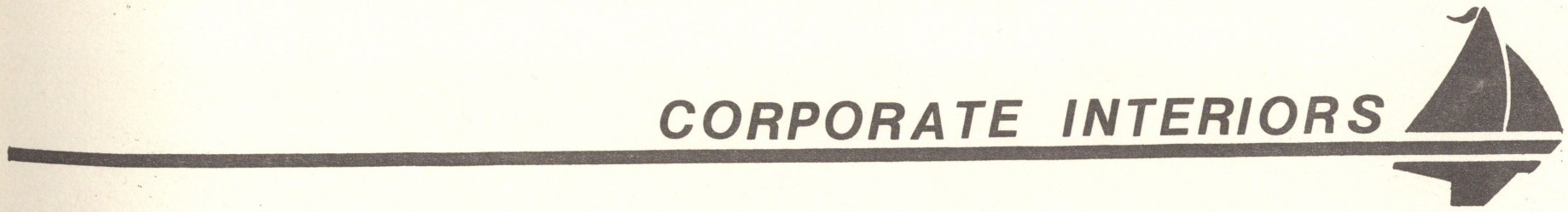
make sure they function properly. A building which does not function is no good to the user.

The corporate headquarters is important in establishing the image for a corporation, so important that some companies like TransAmerican in San Francisco use their buildings as the symbol of their identity. To establish the proper form for the building, the architect must first understand what the corporation stands for. The architect must then be able to define it in terms of three-dimensional forms and space. Take a look around at buildings such as performing art centers, jails and churches. Try to identify and understand why their shapes speak to you and tell you that they are active, static or established. Gather this information and try to spell it out in your own terms. You shouldn't have to stick a sign on it in order for someone to realize what it is about. By using elements which have been repeatedly used such as a glass curtain wall, you may find yourself falling into a generic category and lose the intended identity. But don't invent forms for the sake of inventing forms. An invented form has no meaning to the general eye. Take parts and pieces of existing buildings, re-use them in new and innovative ways. This way you still maintain the viewer acceptance and yet establish your own identity.

I don't think symbolism and establishing a meaning through form holds true with just corporate headquarters. It is possible to establish a meaning in any kind of building. A house, for example, may be able to speak of the personalities living in it.

Let the buildings speak. Communicate the intended meanings through the forms you use. Create a favorable atmosphere, first impressions tend to be lasting ones.

You can never have the use of the inside of a cup without the outside. The inside and the outside go together. They're one.



INTERIORS

The interior of a building says just as much to a person as the exterior. The building's thoughts, ideas and management philosophies should be carried through from the exterior to the interior. A problem which sometimes occurs is that the office space becomes unusable because of the corporate's ego or because of an architect's vision on what the building may look like.

Ideally a building is built from the inside-out, addressing the users' needs. A building is perceived both visually and spatially. As anthropologist Edward Hall states, "Man's experience of space is not visual alone, but multisensory and related to action."[12] People interact with space from the minute they enter the grand scale public space to the personal scale work areas. The personal work areas are

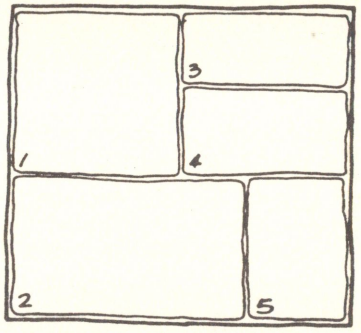
just as important in communicating an idea as the public spaces.

A corporation must project its ideals to the employee just as it does to the public. One way is to give the employee satisfactory work space. Research has shown that satisfaction with the environment is closely associated with self-related job performance.[13] In Edward Hall's report, "The Fourth Dimension in Architecture, The Impact of Buildings on Man's Behavior," Hall notes that if one is not able to identify with or personalize their work space that their creativity as well as their own sense of individuality is hampered. As one employee said, "When I leave my office at night, there is nothing of me left in it."[14] The individual's office space should be arranged how the individual wants. By allowing this, work production has been shown to improve, the individual office spaces show some character, and when the employees arrive in the morning they arrive to a space in which they are familiar and feel welcome.

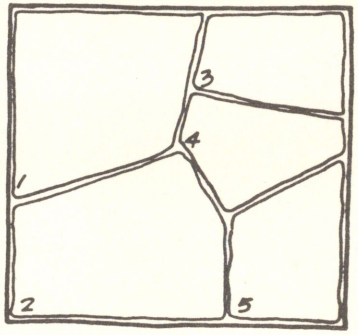
The open plan office system, sometimes referred to as office landscaping, is a relatively new idea in office planning. The first American system was designed in 1967 for DuPont. Since then many companies have shifted to open landscaping design, while others have elected to stay with the conventional office layout. There seems to be no real right or wrong, it's usually decided on what system the company prefers. For instance, when Weyerhaeuser Company designed its new headquarters in Tacoma, Washington, they switched over to an office landscape approach. The 360,000 square-foot building is the largest U.S. application of open landscaping. Even the top executives have open plan offices. In the case of Union Carbide's Corporation world headquarters in Danbury, Connecticut, the exact opposite occurred. Union Carbide found that it was spending 1.5 million dollars a year to rearrange their open landscape in existing buildings, and opted to build 2,300 private offices instead. Each system has its advantages and disadvantages. When deciding on a system, the corporation's management philosophies will usually dictate whether the workspace results in a conventional or open landscape system.

OPEN PLANNING

The open planning system if planned correctly can be an efficient use of space and improve inter-office communications. As pointed out in the book "Planning the New Corporate Headquarters," there are some distinct advantages and disadvantages in open planning. The advantages of open planning are that most employees enjoy natural light and a view to the exterior. Open planning allows this because no one has walls. Second, the plan is highly flexible. The space can be rearranged or offices moved with relative ease. Third, by using a modular work station, variations in the user needs can easily be accomplished. Four, the plan is compatible with energy conserving designs. As with any system, there are always disadvantages. The first disadvantage is that there is some loss of oral and visual privacy because of the lack of walls. Second, orientation for visitors may be more difficult than with a conventional plan. Third, there may be a need to supply more conference space to accommodate meetings which may require privacy.[15]



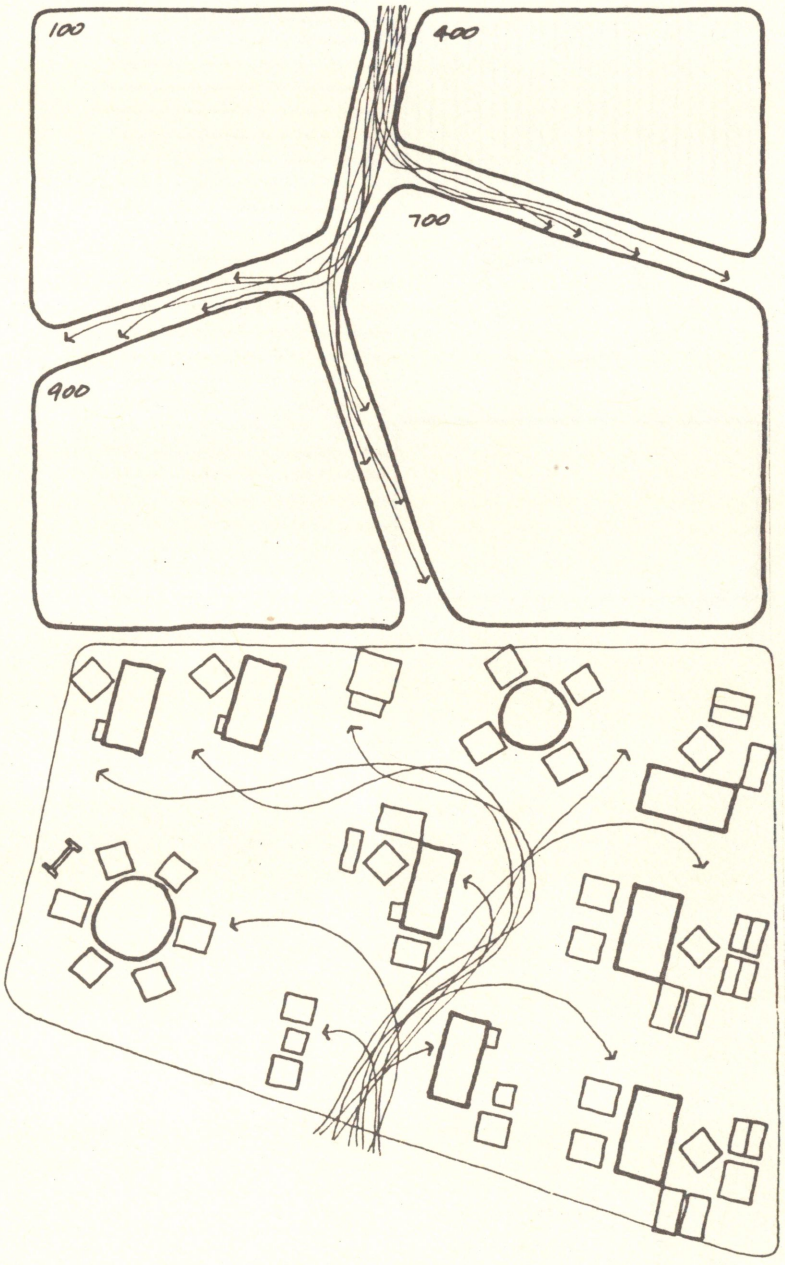

ZONE FORMATION



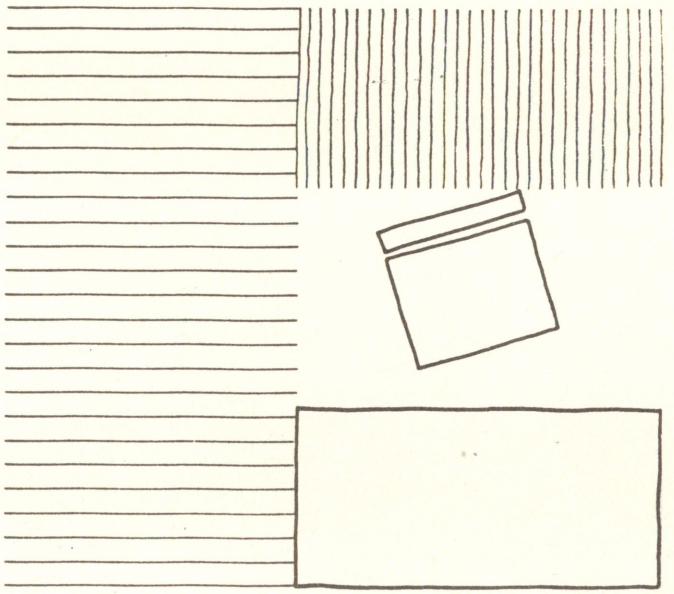

ZONE FORMATION VARIATION

The Zone Formation: The zone formation is a simple process which a designer uses to rid the open plan of any arbitrary layouts. The zone formation helps to establish orderliness and logic. The first step is to lay out bubbles for the individual divisions according to the square footage required. The next step is to lay out the scale bubbles next to spaces which should relate to each other. A few things must be considered when laying out the bubbles. First, the bubbles should touch but not overlap. Second, the bubbles should be kept as fat or squarish as possible. Third, the arrangement of each floor will vary because each floor has different size bubbles and requirements. When laying out the floor, keep in mind how circulation will work on each floor. Avoid having major circulation paths running parallel or perpendicular to each other. After the zone

formation has been laid out for each floor, the individual units may be laid out one division at a time. When laying out the individual divisions, keep in mind the major circulation path and how entry into each department is achieved. Also, entry into each workspace should be kept in mind. A workspace should never be entered from the rear. Once each division is laid out, the designer may start to arrange each unit's furniture and equipment to the appropriate bubble. The final step in the layout is arranging the visual/acoustical screens, plants and planters. The only guideline is to provide enough screens as to allow for privacy. It should be kept in mind that this is a basic arrangement. Once the users move in, they probably will move the screens, plants and planters around as they see fit. The architect is just setting up the basics, the users will be fine tuning the space.[16]

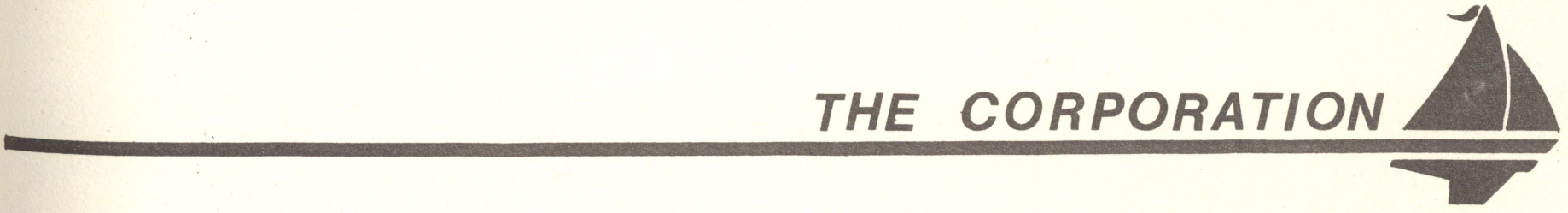


Office Planning Module: The space allocations for the users are usually based on a consistent module. This module is based on user needs and on the compatibility of office functions. The 5' x 5' office-planning module is most commonly used. This dimension was found to meet the average user's needs and as such, most office furniture is designed around it. In some cases it may be necessary to depart from the module, such as in the case with corridors and core spaces. In these cases a half module should be used.



"A monk asked his teacher, 'What is my self?' The teacher answered, 'There is something hidden within your self, and you must become acquainted with its hidden activity.' The monk then asked to be told what this hidden activity was. The teacher just opened and closed his eyes."

Frederick Franck
The Zen of Seeing



## INTENTION

The intention of the corporate headquarters is to be the main corporate headquarters with no production on the site with the exception of prototypes. All production is to take place at various places throughout the country.

The corporation's hopes are to expand their product lines to variations of their existing lines, windsurfers, and to begin marketing sailing accessories.

COMPANY PROFILE

The corporation started as a small maker of sailboats. As the product began to be noticed, the sales picked up and they began to expand their product line. Throughout the following years they began to buy out other small businesses which also produced sailboats and sailboat related products. Eventually they had grown large enough that the need arose to unify all the diverse businesses and build a corporate headquarters. Since the company started as a small business, they are concerned with keeping the original integrity, honesty, quality of their products and service a smaller company can offer. They are also concerned with the well-being of their employees. Since the decision to build, the corporation has decided to get into the limelight and become a known product. Also, their staff of engineers, researchers and designers have always been able to be leading in innovation in their fields. The company intends to keep growing and is concerned about how future expansion on the site will affect the original headquarters.

THE CORPORATION NAME - YESAC

I picked the name of YESAC because I wanted a name which didn't have a known identity such as Dynamic. My hope and intention is that the name builds up its own reputation. It has been done before with companies such as Kodak or Rossingnol. These names have come to mean photographic supplies and ski equipment. The corporation's hope is that YESAC will come to stand for sailboating products.


YESAC
SAILBOATS

## THE CORPORATION

The mission of Yesac Corporation

is to produce durable goods and quality products which meet the needs of all our customers.

The philosophy of Yesac Corporation

is to conduct our affairs in such a manner as to be known for the integrity, honesty, quality and services in which the original smaller businesses produced...to produce products at fair competitive prices...allow for a healthy climate for both corporate growth and individual contribution...and establish a good corporate citizenship in every community in which we do business.

THE PRODUCTS

The products which YESAC produces consist of the following:

Product A: Small "Sunfish" or wet sailboats. The boats vary from 7' to 15' in length. They are the lowest in price and are basically used by the beginner or someone who just wants to have fun.

Product B: Medium sized "daysailers" ranging in length from 15-25'. These boats vary from small cabin type to wet deck type in design. The skill level varies from beginner to advanced.

Product C: Catamaran sailboats from 15-25' in length. Used mostly by advanced sailors because of the speed the boat is able to obtain and the skill level needed to operate it.

## BUILDING GOALS

This section is taken after William Pena's Book "Problem Seeking." In the book Pena has established a criteria in which one may use to understand what a building is about and what it will be. You can't know where you're going until you understand where you've come from.

### Function

The new facility must serve to combine all the diverse activities of a corporation and house them as one. A key to the problem is to serve as a place for large group interaction and yet establish a sense of individual identity and promote human values.

Although the scope of the project seems fairly set, the corporation is a growing one. Thus, the building must understand the growth patterns and be flexible to them.

Form

The corporation has a distinct image of itself in its own eye, as well as in the public eye. The company hopes that the forms the building takes will enhance the company's image and raise the architectural standards of the community.

The company wishes to have top personnel working for it. The company wants a building which would help them attract and hold good personnel.

Economy

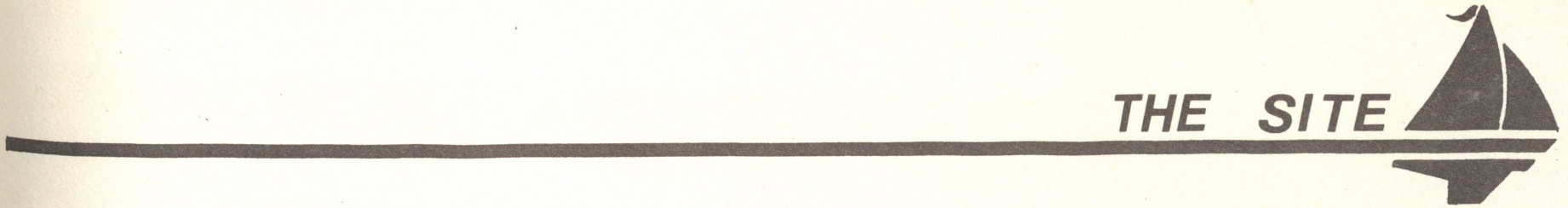
The building fund is virtually limitless, yet the corporation doesn't want to waste money needlessly. Thus, the design should look at all possibilities for cheaper substitutes where possible.

Time

Sailing hasn't changed much over the years, yet has always remained fashionable. It is the client's intention to occupy a building which will be fashionable and remain that way over the years.

He looked at the mirror
and saw his face

He looked into the mirror
and saw himself



## THE SITE

The location of the site is just as important to the corporation as the building itself. When deciding on a site location, such factors as suburban/urban, transportation access, labor unions, taxes and site accessibility should be considered.

The site I have chosen is located in Burnsville, Minnesota. I picked Minnesota for two reasons. One, it is my home state, and two, I felt Minnesota's "10,000 lakes" would help to generate a connection between water and sailing. Burnsville itself is located approximately 20 minutes from Minneapolis and Minnesota's international airport.

I felt by picking a suburban site I could accomplish three things. One, I felt a suburban site would give the corporation a chance to spread out when needed. Two, by being close to the Twin Cities, the corporation could attract

top personnel as well as graduates from the University of Minnesota. Third is that Burnsville, being a suburb, would offer employees a nice place to live close to their work.

The site itself is surrounded by commercial shopping malls, banks and a health club. The north side of the site has a large hill on it. At the base of the hill is a good sized pond or small lake. The remaining section of the site is predominantly flat. Because the site is located amongst commercial and residential areas, and because the company wants to portray an honest image, parts of the site will be accessible for public use.

The population of Burnsville is about 45,000 people and growing rapidly. The population in 1970 was 10,000 and in 1980 grew to 40,000. Cities surrounding Burnsville such as Apple Valley, Lakeville and Eagan are growing just as fast. Bloomington is just north of Burnsville with an established population of 90,000.

## CLIMATIC CONDITIONS

The Twin Cities area with Burnsville included is an area with a climate which demands a definite regional architecture. The warm humid summers and the long cold winters give Minnesota too much sun in the summer and not enough in the winter. The recorded temperature range varies from $-34^{\circ}F$ in the winter to $108^{\circ}F$ in the summer. The following is the average daily temperatures for each month.

| | |
|---|---|
| January | $14^{\circ}$ |
| February | $16^{\circ}$ |
| March | $30^{\circ}$ |
| April | $46^{\circ}$ |
| May | $57^{\circ}$ |
| June | $67^{\circ}$ |
| July | $80^{\circ}$ |
| August | $80^{\circ}$ |
| September | $67^{\circ}$ |
| October | $49^{\circ}$ |
| November | $33^{\circ}$ |
| December | $19^{\circ}$ |

The seasonal precipitation contains much rain and even more snow. In a normal year, most of the annual precipitation falls from May

through August, with June and July being the wettest months. The snowfall in Minnesota is capable of accumulating up to 29 inches in twenty-four hours. The average snowfall in a season is 41 inches with January through March being the heaviest snowfall months, maximum up to 85", minimum about 14".

In mid-summer, the sunrise is approximately 4:30 a.m. and sunset is 7:45 p.m., and in mid-winter sunrise is approximately 7:30 a.m. and sunset is 4:30 p.m. The following is the mean percentage of possible sunshine for each month.

| | |
|---|---|
| January | 50% |
| February | 54% |
| March | 56% |
| April | 58% |
| May | 60% |
| June | 64% |
| July | 73% |
| August | 70% |
| September | 60% |
| October | 53% |
| November | 39% |
| December | 40% |
| Annual | 56% |

The annual prevailing winds vary from season to season. In the summer the prevailing wind direction is from the south at an average speed of 10 mph. In the winter (months November through April) the wind direction is from the northwest at an average speed of 11.5 mph. The following are the prevailing directions and mean speeds for each month.

| | | |
|---|---|---|
| January | Northwest | 11.2 |
| February | Northwest | 11.5 |
| March | Northwest | 12.2 |
| April | Northwest | 12.6 |
| May | South | 11.8 |
| June | South | 10.5 |
| July | South | 4.7 |
| August | South | 9.7 |
| September | South | 10.8 |
| October | South | 11.5 |
| November | Northwest | 11.5 |
| December | Northwest | 11.1 |

An overview of the climatic conditions points to some items which should be kept in mind when deciding on a site location. A south to southeast slope for sun gain is desirable. Placement should be in the middle or lower middle of slope to prevent excessive wind effects and to

avoid cool air pools. The layout should provide sheltering from the winds. On larger building layouts, space them close enough to shelter from the winds but far enough apart to allow for solar radiation to warm the spaces. Public or open spaces should be kept wind sheltered and periodically shaded. The general objectives in a cool region are to increase heat production and reduce conduction and evaporation loss.

Victor Olgyay in his book "Design with Climate" points to some general shelter design strategies which will aid in the design of a building in Minnesota. They are as follows: Form, volume; structures shall be compact with minimum exterior surface. Volume effect is highly desirable. Proportion 1:1-1.3 elongated on east-west axis gives optimum effects. Orientation; optimum sun orientation lies 12° east of south. The prevailing wind pattern (NW-S) may influence the orientation of free standing buildings. Color; sun exposed surfaces in medium colors; recessed surfaces can be dark absorbent colors if shade in summer can be provided. Openings and windows; sun windows will provide good auxiliary heat sources. Except on the south side and partly east, the windows should be small. Windows should be shade protected during overheated times. Shading devices; shading in summer is desirable, but should not interfere with solar impact during underheated times. Although shading is desirable (June, July, August), more than 50% of the time nocturnal temperatures drop below 65° and give cooling relief from the day heat. Do not overemphasize shading.

## SITE ANALYSIS

The following pages contain written and graphic analysis of the site characteristics and its surrounding area.

It includes:

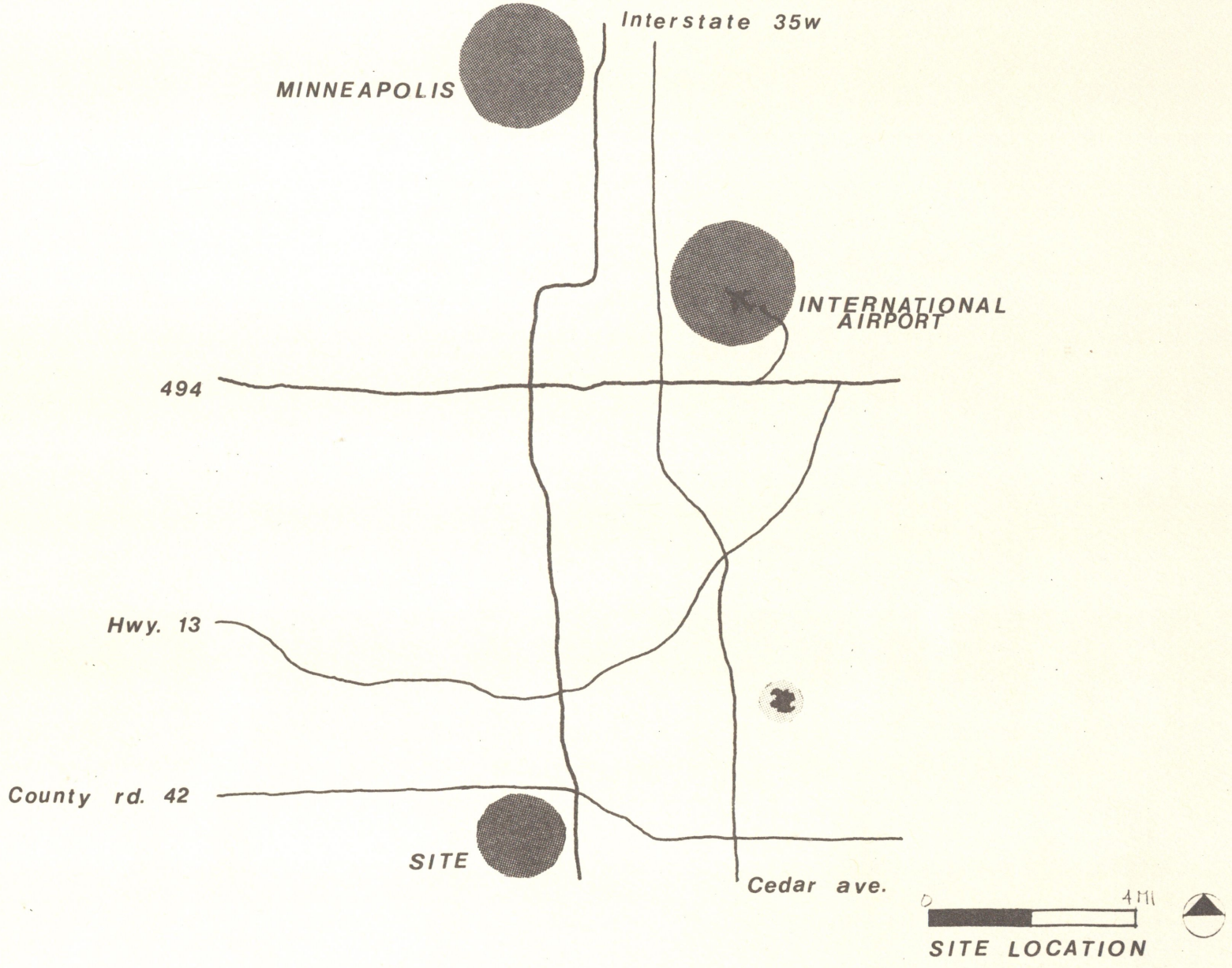
- Site Location
- Site Structure
- Contextural
- Topography
- Views/Vegetation
- Sunpath/Wind Diagram

Site Location

The site has good access to Minneapolis and the international airport making it convenient for incoming guests and visitors. 35W and 494 are four-lane highways on which traffic moves smoothly. It should be noted, however, that during rush-hour traffic and bad weather conditions, traffic is slowed down considerably.

Site Structure

This map points out the macro-layout of the area. A passenger traveling south on 35W may exit on County Road 42. From here the site may be entered from County Road 5 or from Burnhaven Drive. Secondary access may be obtained from 143rd. It should be noted that the southwest edges of the site are basically undeveloped. The east and north edges of the site are developed with commercial space.

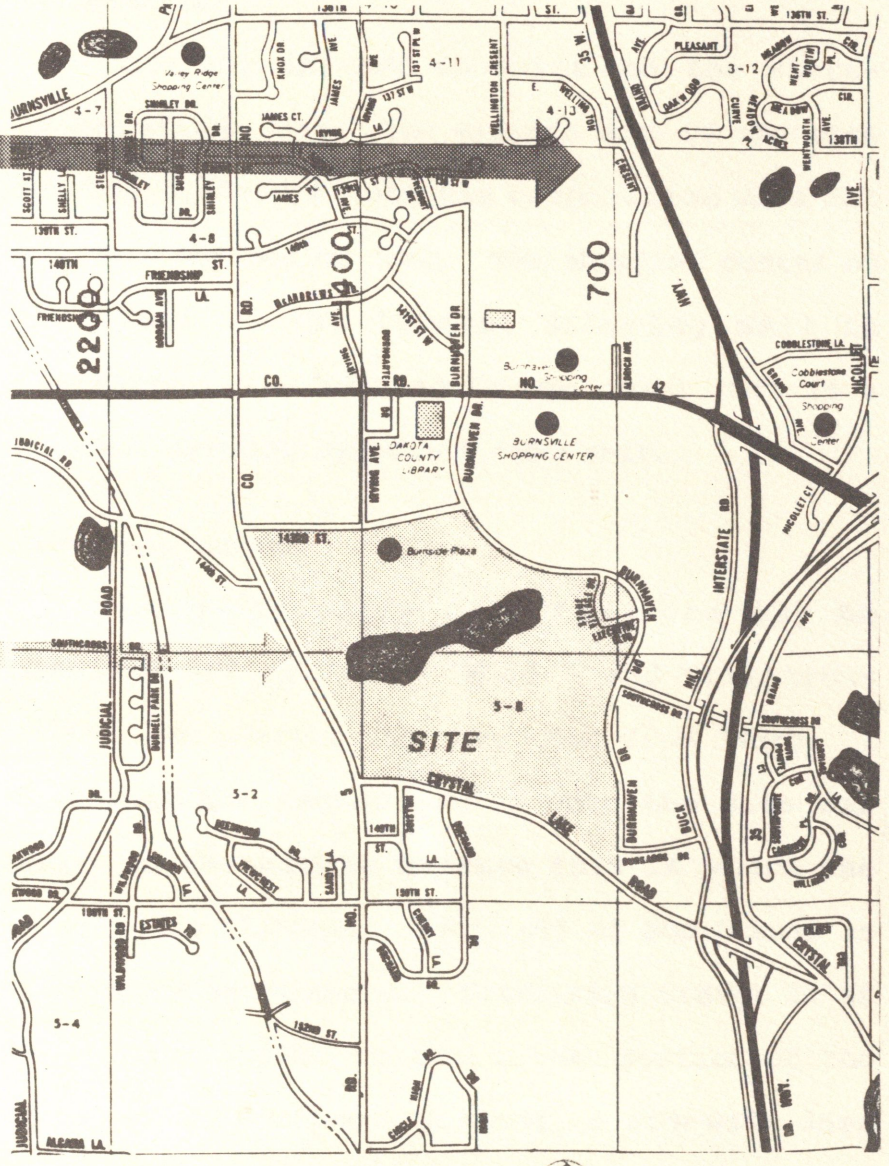



SITE LOCATION

INTERSTATE 35 W -
MAJOR CIRCULATION TO
SITE FROM MINNEAPOLIS
AND AIRPORT

COUNTY ROAD 42 -
SECONDARY ROUTE
TO SITE

SITE LOCATION
LAND = 165 ACRES
LAKE = 21 ACRES



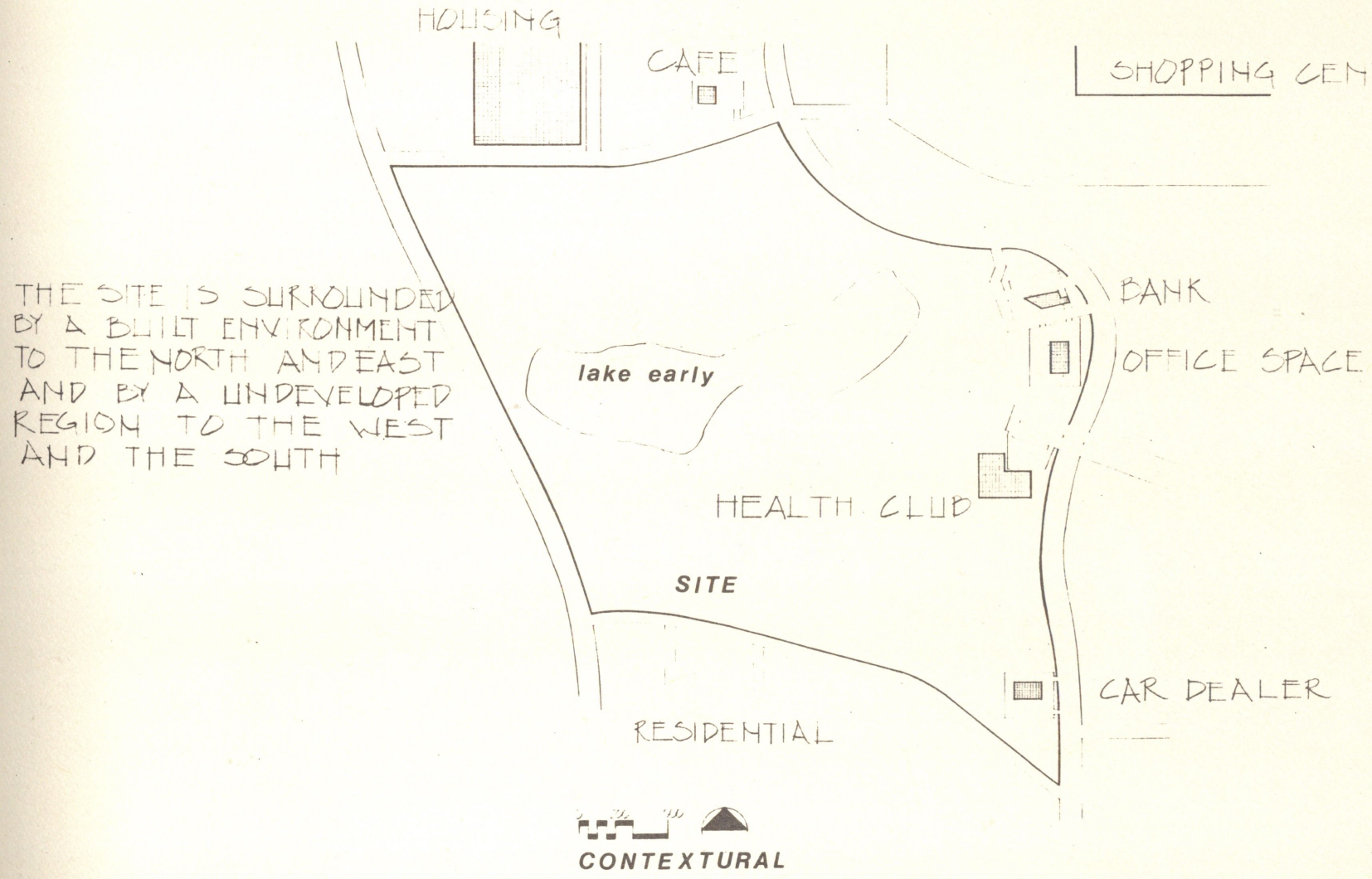

SITE STRUCTURE

Contextural

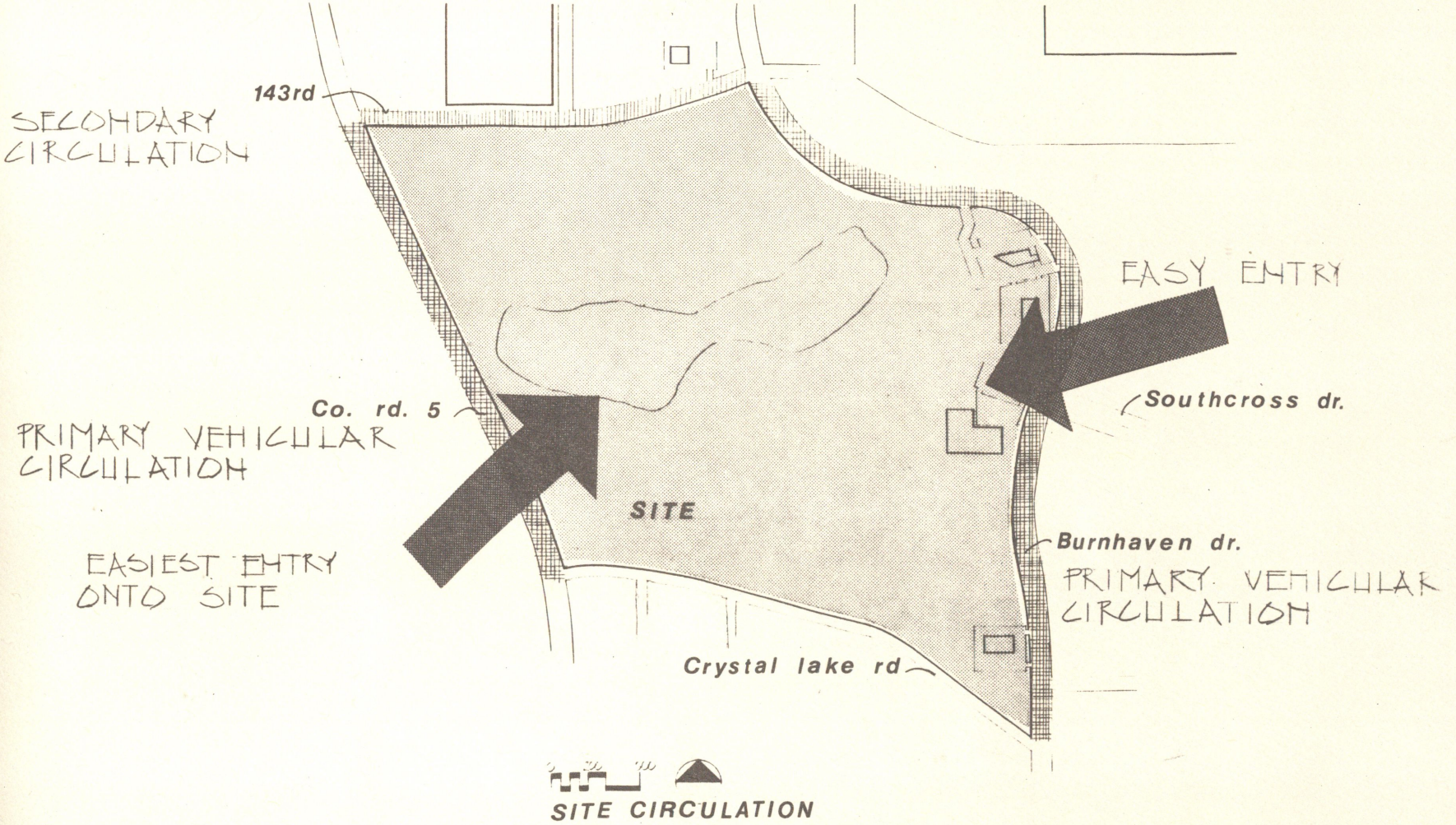
This map intends to point out the micro-layout of the site. The eastern edge of the site has been developed and the corporation does not own this portion of land. The shopping center on the right is the largest shopping mall in Minnesota. The housing to the upper left is a low-cost housing apartment type unit.

Site Circulation

The major entry onto the site may be obtained off of County Road 5 and Southcross Drive. Secondary access may come from 143rd. I felt that the easiest entry onto the site was about in the middle because this is where the site is the flattest. Entry off of Southcross is considered an easement. Pedestrian travel is at this point limited because a vast portion of the site is undeveloped. However, a sidewalk does exist along Southcross Drive.


HOUSING
CAFE
SHOPPING CENTER
THE SITE IS SURROUNDED BY A BUILT ENVIRONMENT TO THE NORTH AND EAST AND BY A UNDEVELOPED REGION TO THE WEST AND THE SOUTH
BANK
OFFICE SPACE
lake early
HEALTH CLUB
SITE
CAR DEALER
RESIDENTIAL
CONTEXTURAL

SITE IS UNDEVELOPED. PEDESTRIAN TRAVEL IS LIMITED



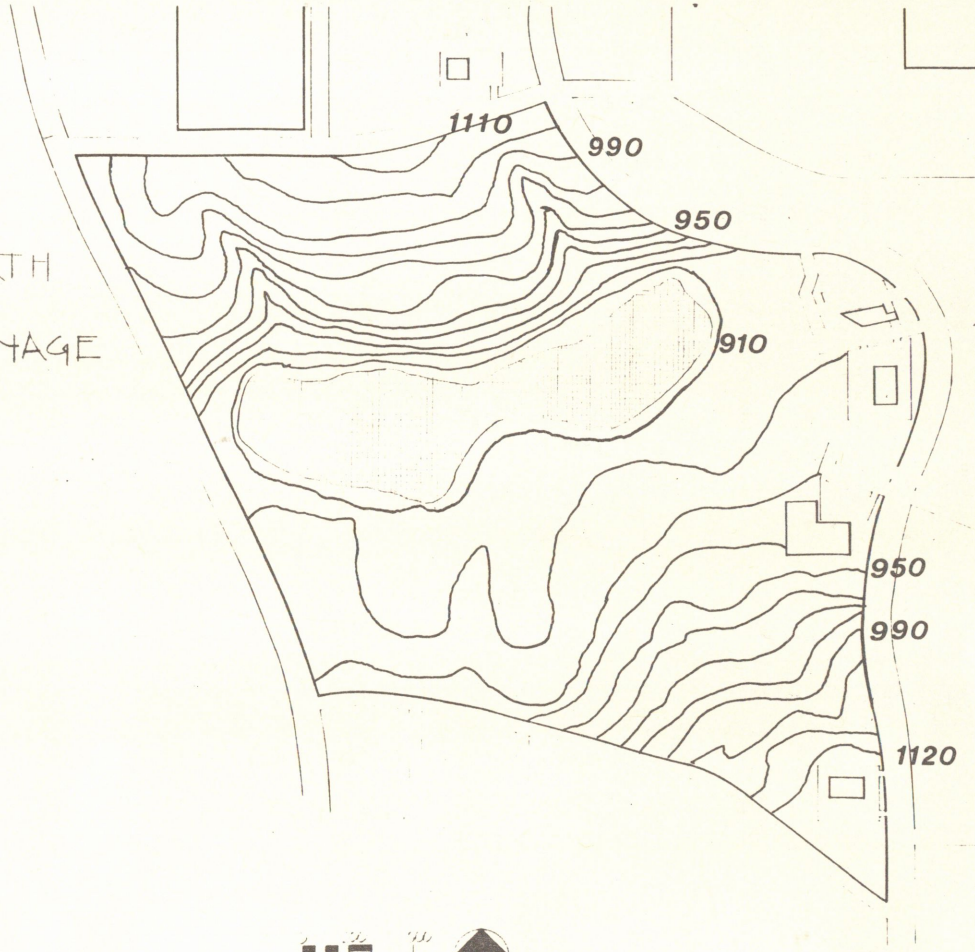
Topography

The site has a fair sized hill on the north and southeast sides. The middle portion is generally flat. All site drainage goes into the lake.

Views/Vegetation

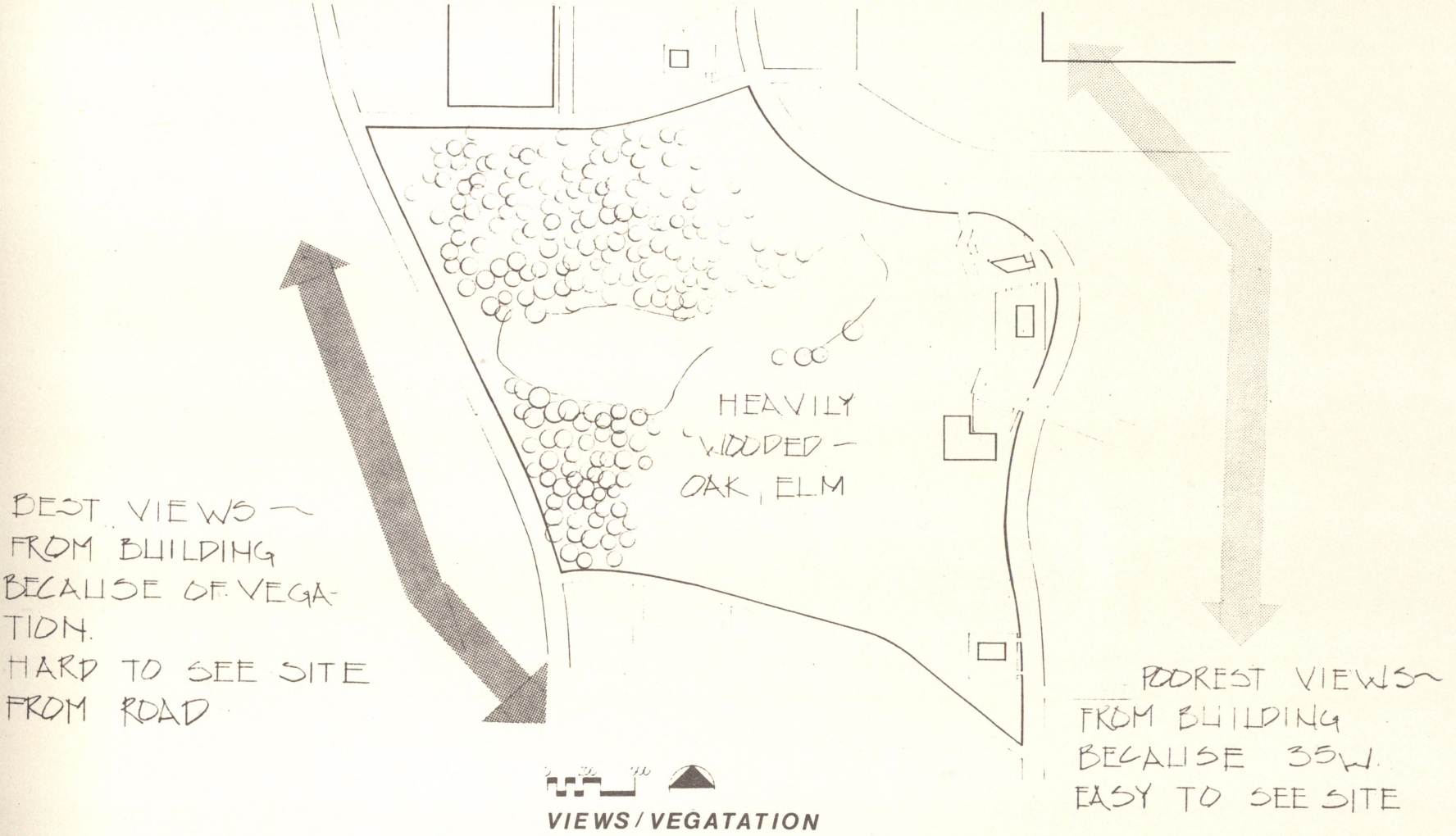
The site is heavily wooded on the north and west edges. The trees are oak and elm. The remainder of the site is basically bare with the exception of weeds. As far as views go, there are two ways one may look at it. From the building the best views would be along the west edge of the site. The problem here is that the building would be hard to see from the west edge. The worst views are to the east edge because of the highway, but the building would be highly visible from the highway. Building location should take this into account. Optimum views would be where the building looks west, but is highly visible from the east.

SITE SLOPES ON NORTH AND SOUTH EDGES CAUSING ALL DRAINAGE TO THE LAKE




SITE ELEVATIONS IN INCREMENTS OF 10'

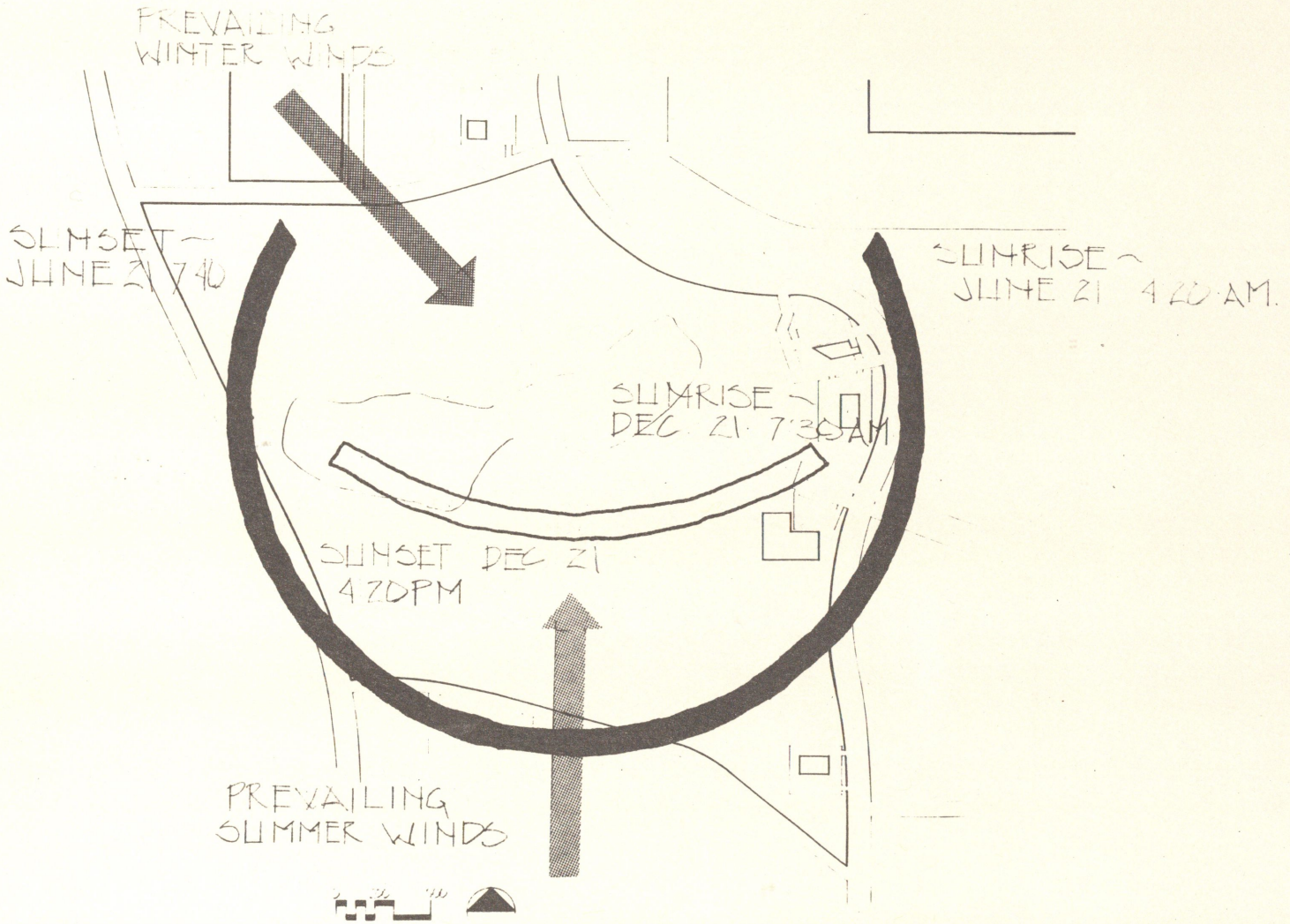
TOPOGRAPHY




***VIEWS / VEGATATION***

Sunpath/Wind Diagram

This diagram is basically self explanatory. The chart shows the path the sun will travel on the longest day of the year, June 21, and on the shortest day of the year, December 21. The prevailing winds are from the northwest with the summer winds coming from the south.




***SUNPATH / WIND DIAGRAM***

To the man who knows nothing, mountains are mountains, waters are waters, and trees are trees. But when he has studied and knows a little, mountains are no longer mountains, water is no longer water, and trees are no longer trees. Finally, when he has thoroughly understood, mountains are once again mountains, waters are waters, and trees are trees.

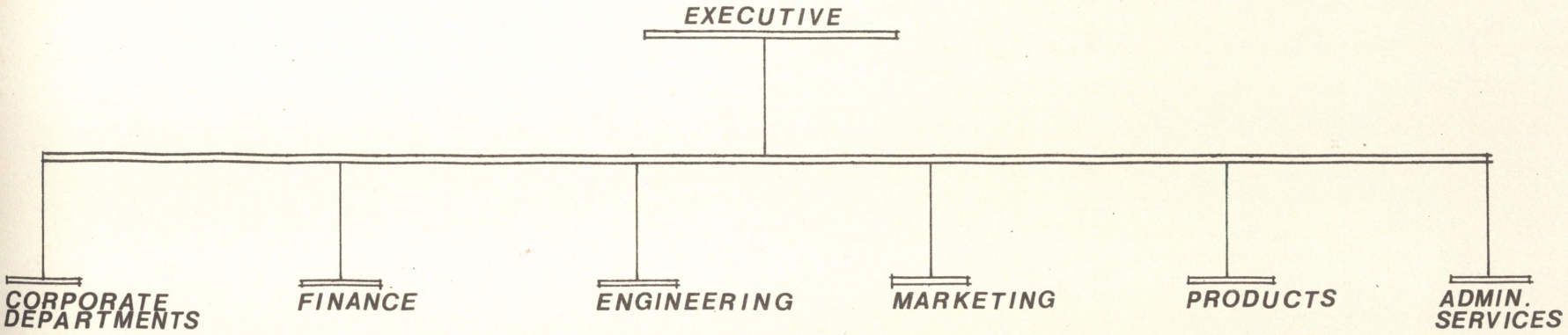
Zen philosophy
Quoted by Edward Weston

# THE PROGRAM



## THE CORPORATE STRUCTURE

To help one understand the office make-up, I have developed a corporate hierarchy. Established is the executive level with the vice presidents reporting to the executive level. From here to further understand each division, I have grouped the individual division, its make-up and its space requirements on the following pages.


EXECUTIVE
CORPORATE DEPARTMENTS
FINANCE
ENGINEERING
MARKETING
PRODUCTS
ADMIN. SERVICES

USER PROFILES

Executive - The top management includes vice presidents, president and chairman of the board. A collection of personnel from various educational backgrounds such as business, engineering etc. have gained their positions and status by working their way through the ranks and as such require deluxe accommodations. Positions reflect corporate policies and as such so should their offices.

Managers - Occupations requiring administrative personnel who set broad policies, exercise overall responsibility for execution of these policies, and direct individual departments or special phases of a firm's operations. They have a staff under them and report to the vice presidents. Includes: middle management, department managers and supervisors who are members of management. The spaces occupied are somewhat

refined from the executives. They will occupy enclosed spaces because of the kind of information which passes by their desks.

Technicians - Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through about two years of post high school education. Includes: computer programmers and operators, drafters, engineering aides and technicians. Office space will be included in the open scheme. Computer space is a possibility in each office.

Sales - occupations engaging wholly or primarily in direct selling. Includes: advertising agents, salesworkers, public relations and communications. Individual offices with close relationships to other personnel needed.

Office and Clerical - Includes all clerical type work regardless of level of difficulty, where the activities are predominantly nonmanual. Includes bookkeepers, cashiers, collectors, messengers, typists and secretaries. Work space is more open than other workers and should be easily accessible.

Service Workers - Workers in both protective and non-protective service occupations. Includes: attendants, cleaners, cooks, guards, janitors and maintenance personnel. Because of the type of jobs occupied by these personnel, it is unlikely that they have any office space.

Related Occupations - People who frequently visit the building for business reasons. Includes: salesmen, messengers, and repair men. Do not have any office space but should be allowed a waiting room. Should be able to find way around easily after passing security checkpoint.

General Public - Basically don't have much to do with the corporation other than to live with and look at it.

IN A NUT SHELL

This is a quick reference to the site and building.

Site:

Land: Total square feet = 7,360,000

acres = 165

Lake: Total square feet = 920,000

acres = 21

Building:

Total number of employees = 380

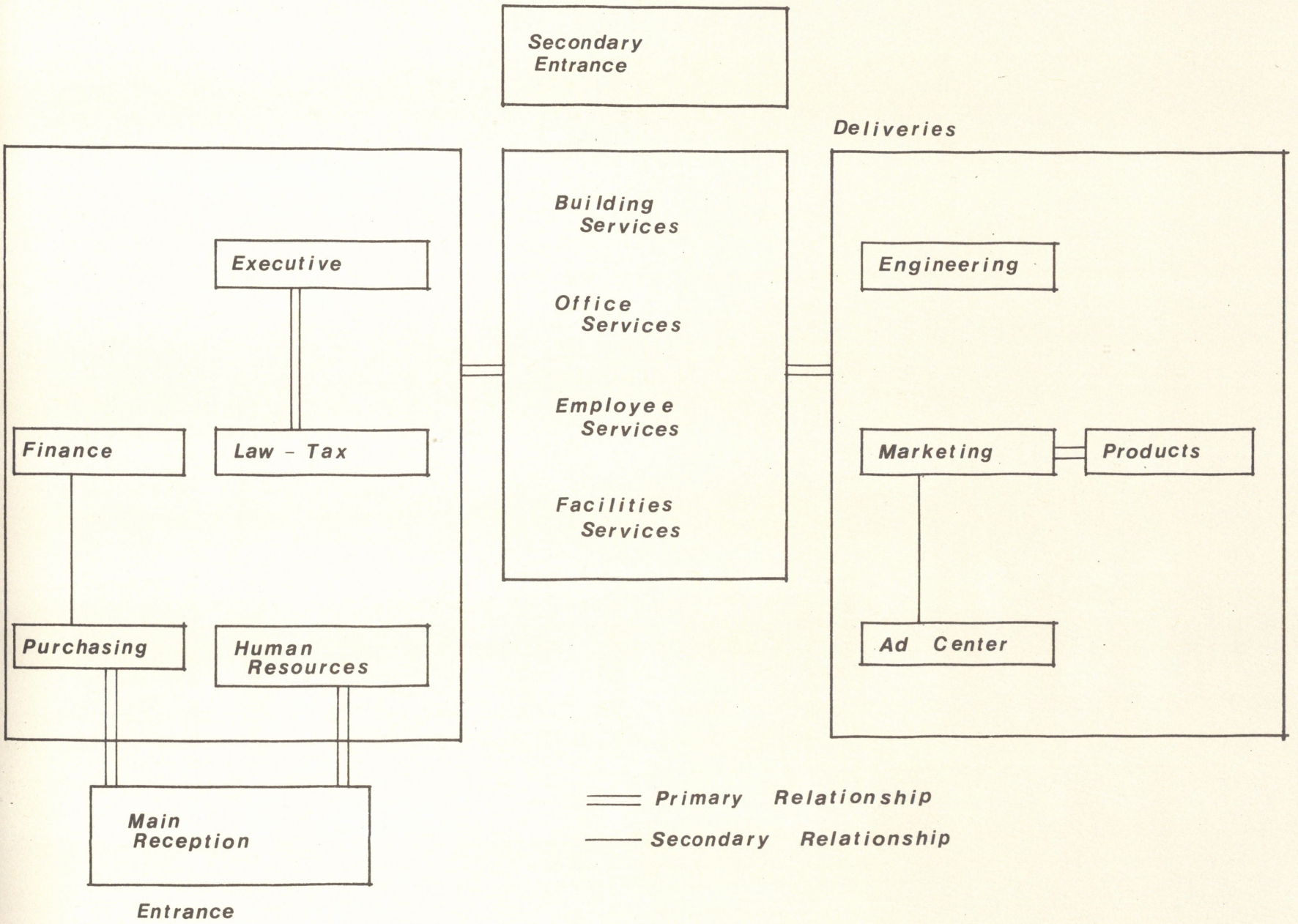
Total building size = 90,000 sq. ft.

Parking for 425 cars = 130,000 sq. ft.

| | EMPL. | SQ. FT. | ACTIVITIES | INTERACTION | PRINCIPLE SPACES | NOTES |
|---|---|---|---|---|---|---|
| EXECUTIVE | | | GENERAL ADM.<br>BOARD POLICIES<br>BUS. DEVELOP | LEGAL<br>CORPORATE PLANNING<br>COMMUNICATIONS<br>FINANCE | EXEC. OFFICE<br>BOARD ROOM<br>RECEPTION<br>CONFERENCE ROOMS | TOP QUALITY SPACES |
| CORPORATE DEPARTMENT | | | PURCHASING<br>LAW / TAX<br>HUMAN RESOURCE<br>AD CENTER | MANUFACTURING<br>EXECUTIVE<br>COMM.<br>PRODUCT | OFFICES<br>WORD PROC<br>CONF. ROOMS<br>FILES<br>TESTING RMS | MADE UP MOSTLY OF CLERICAL— ALLOW FOR EASY INTERACTION |
| FINANCE | | | ACCOUNTING<br>PAYROLL<br>OFF. SERVICES<br>BUDGET | EXECUTIVE<br>TREASURY<br>EMPLOYEE RELATIONS | OFF. / WORK STAT.<br>OPEN AREAS<br>COMPUTERS<br>CENTRAL REC. | MED. QUALTIY SPACES |
| ENG./ MANF. | | | PROD. AND MATRL PLANNING<br>TRAFFIC<br>QUALITY CONTROL | PURCHASING<br>MARKETING | OFF. / DRAFTING<br>MODEL SHOP<br>QUALTIY LAB | ACCESS TO DELIVERYS<br>COMPUTER<br>DURABLE SPACE |

| | EMPL. | SQ. FT. | ACTIVITIES | INTERACTION | PRINCIPLE SPACES | NOTES |
|---|---|---|---|---|---|---|
| MARKETING | 47 | 5380 | MARKETING – RESEARCH PLANNING SALES | COMMUNICATION PLANNING ENGINEERING | OFFICES WORD PROC. COMPUTERS WORK STATIONS | ½ MANAGEMENT ½ SECRETARIAL MED. QUALITY FINISHES |
| PRODUCTS | 51 | 6000 | MANAGING THE PRODUCTS | ENGINEERING MARKETING AD CENTER | OFFICES FOR PRODUCT MANAGERS AND STAFF | EASILY ACCESABLE. MED. QUALITY FINISHES |
| ADMIN. SERVICES | 35 | 20,245 | CAFETERIA LOUNGE HEALTH RECREATION MAINTENANCE RECEIVING | ALL | VARIABLE | USED BY ALL CENTRAL DURABLE FINISH |
| TOTALS | 364 | 66,935 | | | | |

ADD 30% FOR MECHANICAL AND CIRCULATION ~ 21,000SQ FT.
BUILDING TOTAL


Secondary Entrance
Deliveries
Building Services
Office Services
Employee Services
Facilities Services
Executive
Finance
Law - Tax
Purchasing
Human Resources
Engineering
Marketing
Products
Ad Center
Main Reception
Entrance
Primary Relationship
Secondary Relationship

EXECUTIVE LEVEL

| | Sq.ft. |
|---|---|
| Chairman of the Board | 450 |
| President | 450 |
| Vice President - Corporate Departments | 300 |
| Vice President - Finance | 300 |
| Vice President - Engineering/Manufacturing | 300 |
| Vice President - Marketing | 300 |
| Vice President - Products | 300 |
| Vice President - Administrative Services | 300 |
| Secretarial (for 8 at 200 sq. ft.) | 1600 |
| Extra Spaces: | |
| Reception | 300 |
| Board Room (for 12 at 35 sq. ft.) | 450 |
| Conference | 250 |
| Rest Rooms (4 at 200 sq. ft.) | 800 |

CORPORATE DEPARTMENTS

## Purchasing

Duties: Makes purchases for headquarters and off site operations.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Senior Buyer | 150 |
| 2) Buyer | 125 |
| 3) Buyer | 125 |
| 4) Assistant Buyer | 100 |
| 5) Secretarial (2 at 75) | 150 |
| TOTAL | 850 |

NOTE: High volume of visitors should be near main entrance. Need for central files.

## Law and Tax

Duties: Tax and legal services for corporation.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) General Counsel | 150 |
| 2) Legal Counsel (2 at 150) | 300 |
| 3) Patent Counsel | 150 |
| 4) Trade Regulations (2 at 150) | 300 |
| 5) Tax (2 at 150) | 300 |
| 6) Secretarial/Clerical (9 at 75) | 675 |
| 7) Word Processing Station and Work Space | 100 |
| TOTAL | 2175 |

Human Resources

Duties: Administers employee compensation and benefit plans. Recruits, interviews, and hires technical and professional staff. Manpower planning, labor relations.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager (2 at 150) | 300 |
| 1) Employee Relations (2 at 150) | 300 |
| 2) Employee Services (2 at 100) | 200 |
| 3) Training (2 at 150) | 300 |
| 4) Personnel (3 at 150) | 450 |
| TOTAL | 1550 |

| Extra Space | |
|---|---|
| 1) Reception Room | 300 |
| 2) Testing Room (2 at 40) | 80 |
| 3) Interview Room | 100 |
| 4) Files (X at 8) | |
| 5) Printing Space | 200 |
| TOTAL | 680 |

NOTE: Reception Room should be adjacent to main reception for the headquarters. Periodic use of large conference room for orientation.

Ad Center

Duties: Public relations, advertising, corporate communications.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Public Relations (4 at 125) | 500 |
| 2) Advertising (4 at 125) | 500 |
| 3) Corporate Communications (3 at 125) | 375 |
| 4) Secretarial (6 at 75) | 450 |
| Extra Spaces | |
| 1) Ad Layout | 500 |
| TOTAL | 2525 |

FINANCE

General Accounting

Duties: Administers corporate accounting and profit, accounting, and financial reports.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Cost Accounting (5 at 125) | 625 |
| 2) Product Cost Clerk (2 at 125) | 250 |
| 3) Accounts Payable (3 at 125) | 375 |
| 4) Accounts Receivable (3 at 125) | 375 |
| 5) Secretarial (6 at 75) | 450 |
| 6) Special Storage Units for Ledgers and Printouts | 100 |
| TOTAL | 2375 |

Payroll and Office Services

Duties: Process payroll and records. and process cash negotiables. arrangements. Manage Travel

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Payroll Coordinator (2 at 125) | 250 |
| 2) Salaried and Hourly payroll Clerks (4 at 125) | 500 |
| 3) Time Keeper and Cashier(2 at 125) | 250 |
| 4) Secretarial | 75 |
| 5) Storage Space | 50 |
| TOTAL | 1325 |

Budget and Operations

Duties: Corporate finance, financial planning.

| Office Space: | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Budget and Financial Analyst (3 at 125) | 375 |
| 2) Budget and Property Clerk ((3 at 125) | 375 |
| 3) Cost Analyst (3 at 125) | 375 |
| 4) Cost Accounting Analyst (3 at 125) | 375 |
| 5) Secretarial (9 at 75) | 675 |
| 6) Storage Space | 50 |
| TOTAL | 3375 |

ENGINEERING AND MANUFACTURING

## Production and Material Planning

Duties: Production planning

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Production and Material Planning (3 at 125) | 375 |
| 2) Production Planning Coordinator/ Analyst (3 at 125) | 375 |
| 3) Production Scheduling Coordinator (3 at 125) | 375 |
| 4) Production Control (3 at 125) | 375 |
| 5) Material Scheduling (4 at 100) | 400 |
| 6) Secretarial (10 at 75) | 750 |
| 7) Computer Terminals | |
| TOTALS | 2850 |

## Material Expediting and Traffic

Duties: Transport freight, distribution of materials and products, rates and regulations.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Expeditor (3 at 125) | 375 |
| 2) Traffic Order Coordinator (2 at 125) | 250 |
| 3) Traffic Clerk, Claims and Tracing (4 at 125) | 500 |
| 4) Secretarial (5 at 75) | 375 |
| 5) Computer Terminal | |
| TOTAL | 1700 |

NOTE: Substantial record keeping centralized records.

## Engineering Services

Duties: Mock-up models of new products, drafting, codes.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Engineer - specs and procedures (3 at 125) | 375 |
| 2) Information Engineer (3 at 125) | 375 |
| 3) Computer Coordinators (7 at 75) | 525 |
| 4) Engineer - Materials (3 at 125) | 375 |
| 5) Model Shop Supervisor | 125 |
| 6) Project Engineer (Codes) (3 at 125) | 375 |
| 7) Project Engineer (Packaging) (3 at 125) | 375 |
| 8) Drafters (7 at 85) | 595 |
| 9) Secretarial (5 at 75) | 375 |
| Extra Space | |
| 1) Model Shop | 1000 |
| TOTAL | 4695 |

## Product Engineering

Duties: Drafting and engineering of new products.

| Office/Drafting Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Product Engineer (3 at 125) | 375 |
| a) Lead Drafters (3 at 85) | 255 |
| 2) Engineer (2 at 125) | 250 |
| 3) Project Engineer (3 at 125) | 375 |
| a) Lead Drafter (2 at 85) | 170 |
| b) Layout Drafter (3 at 85) | 255 |
| c) Detail Drafter (3 at 85) | 255 |
| 4) Secretarial (2 at 75) | 150 |
| TOTAL | 2285 |

## Quality Control and Safety

Duties: Quality assurance and control, safety programs.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Quality Engineer (3 at 125) | 375 |
| 2) Quantity Engineer (2 at 125) | 250 |
| 3) Lab Technician | 125 |
| 4) Safety Engineer (2 at 125) | 250 |
| 5) Secretarial | 75 |
| Extra Space | |
| 1) Testing Facilities | 1500 |
| 2) Storage | 500 |
| TOTAL | 3275 |

MARKETING

Marketing Research

Duties: Product Research, acceptability in public.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Survey Research (3 at 125) | 375 |
| 2) Quantitative Research (3 at 125) | 375 |
| 3) Qualitative Research (3 at 125) | 375 |
| 4) Secretarial (6 at 75) | 450 |
| 5) Work Stations (2 at 65) | 130 |
| 6) Computer Terminals | |
| TOTAL | 1905 |

Marketing Planning

Duties: Deciding and planning of new and existing products.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Business Analysis (3 at 125) | 375 |
| 2) Competitive Analysis (3 at 125) | 375 |
| 3) Information (3 at 125) | 375 |
| 4) Secretarial (6 at 75) | 450 |
| TOTAL | 1775 |

Marketing Sales

Duties: Administers sales in the Field.

| Office space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Forecasting (4 at 125) | 500 |
| 2) Sales and Development (5 at 125) | 625 |
| 3) Secretarial (5 at 75) | 375 |
| TOTAL | 1700 |

PRODUCTS

Administer product development and marketing strategies for particular products within a division.

Product A: Small "Sunfish" type sailboats, 7-15' in length.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Monitor Marketability (2 at 125) | 250 |
| 2) Product Strategies (4 at 125) | 500 |
| 3) Product Operations (3 at 125) | 375 |
| 4) Sales and Distribution (3 at 125) | 375 |
| 5) Secretarial (4 at 75) | 300 |
| TOTAL | 2000 |

Product B: Medium sized "wet" and cabin type sail boats, 15-25' in length.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Monitor Marketability (2 at 125) | 250 |
| 2) Product Strategies (4 at 125) | 500 |
| 3) Product Operations (3 at 125) | 375 |
| 4) Sales and Distribution (3 at 125) | 375 |
| 5) Secretarial (4 at 75) | 300 |
| TOTAL | 2000 |

Product C: Catamarans, 15-25' in length.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Monitor Marketability (2 at 125) | 250 |
| 2) Product Strategies (4 at 125) | 500 |
| 3) Product Operations (3 at 125) | 375 |
| 4) Sales and Distribution (3 at 125) | 375 |
| 5) Secretarial (4 at 75) | 300 |
| TOTAL | 2000 |

| Design Center | Sq.Ft. |
|---|---|
| A) Head Designer | 200 |
| 1) Designer | 125 |
| 2) Draftsman (2 at 85) | 170 |
| TOTAL | 495 |

ADMINISTRATIVE SERVICES

Employee Services

Duties: All functions concerning the employee and their well-being.

| Office Space | | Sq.Ft. |
|---|---|---|
| A) Manager | | 200 |
| 1) Secretarial | | 75 |
| | TOTAL | 275 |

B) Cafeteria

Meals served/# shifts + 10%
350/3 + 10% = 150

| | | |
|---|---|---|
| Employee Seating Area | 150 x 15 | 2250 |
| Food Serving Area | Seating x 5 | 750 |
| Private Executive Dining (25 X 20) | | 500 |

C) Kitchen and Support

Food preparation, dry and refrigerated storage, dishwashing.

| | | |
|---|---|---|
| Meals x 3.2 | | 480 |
| | TOTAL | 3980 |

D) Employee Lounge — Sq.Ft.

| | | |
|---|---|---|
| Largest Volume = ½ Lunch | 75 x 15 | 1125 |

Space includes: tables, chairs, pool table, darts, television.

E) Health Suite

| | | |
|---|---|---|
| Waiting Room with Nurse | | 300 |
| Exam Room (2 at 100) | | 200 |
| Storage | | 50 |
| | TOTAL | 550 |

F) Recreation/Physical Fitness

| | | |
|---|---|---|
| Mens lockers/showers | | 700 |
| Womens lockers/showers | | 500 |
| Sauna (2 at 50) | | 100 |
| Whirlpool (2 at 50) | | 100 |
| Exercise Room | | 500 |
| ~~Running Track~~ | | 13,300 |
| Outdoor Running | | |
| Outdoor Tennis | | |
| | TOTAL | 14,200 |

Building Services

Duties: Care, maintenance and overall functioning of the building.

| Office Space | | Sq.Ft. |
|---|---|---|
| A) Manager | | 200 |
| 1) Security Control Center | | 100 |
| 2) Control Room | | 150 |
| 3) Building Services Foreman | | 100 |
| 4) Secretary | | 75 |
| | TOTAL | 625 |
| B) Mechanical and Electrical 15% of net square footage | TOTAL | 10,000 |
| C) Maintenance | | |
| 1) Maintenance Shop/Repair | | 350 |
| 2) Housekeeping Supply | | 150 |
| 3) Various Janitor Closets | | 50 |
| 4) Yard Equipment Storage | | 200 |
| 5) Storage Garage (5 at 200) | | 1000 |
| | TOTAL | 1750 |
| D) Receiving and Storage | | |
| 1) Receiving Dock | | 300 |
| 2) Control Office | | 150 |
| 3) Storage Rooms | | 300 |
| | TOTAL | 750 |
| E) Computer | TOTAL | 300 |

Office Services

Duties: Services supplied to all corporate departments.

| Office Space | Sq.Ft. |
|---|---|
| A) Manager | 200 |
| 1) Facilities management - planning of relocation and space changes drafting. (2 at 85) | 170 |
| 2) Storage for Prints | 50 |
| TOTAL | 420 |
| B) Office Services | |
| 1) Mail Room/Messenger 8% net sq.ft. | 400 |
| 2) Reproduction Center - Volume copying, reduction, central transcription, word processing. 1.5% net sq. ft. | 700 |
| 3) Main Reception 1.0% net sq. ft. | 500 |
| 4) Telephone and Telex Operations | 200 |
| 5) Office Supplies Storage | 200 |
| TOTAL | 2000 |

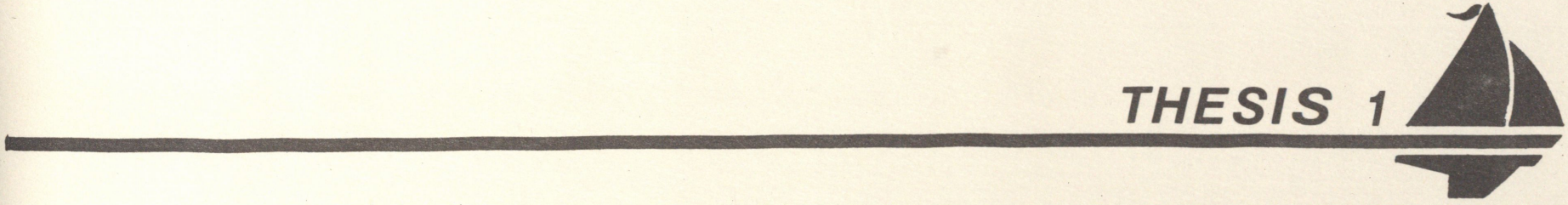
Facilities Services

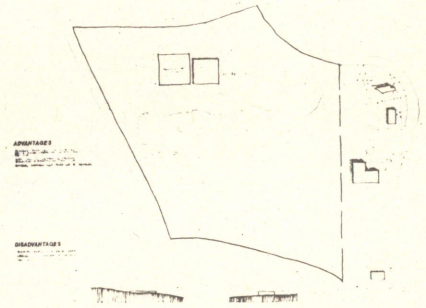
| | Sq.Ft. |
|---|---|
| A) Conference Rooms | |
| 20 sq. ft./person | |
| May vary in size from 6-12 | 240 |
| B) Library | |
| 1) .1 sq.ft. per volume based on 5000 | 500 |
| 2) Librarian and Repair | 200 |
| 3) Readers Stations (10 at 250) | 250 |
| C) Auditorium | |
| 1) 200 people maximum x 6 sq.ft. per person (Space should be dividable) | 1200 |
| 2) Audio/Visual | 200 |
| D) Restrooms | |

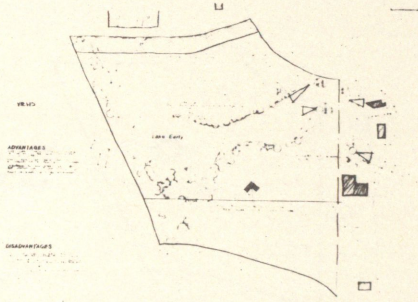
Will vary for men 225-125
For women 300-400, depending on location.

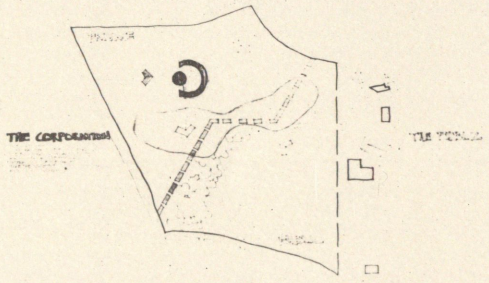
Walking in,
he knew all the answers

Walking out,
he had just begun to think

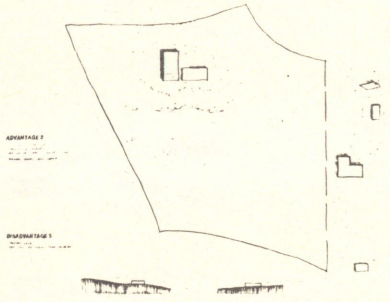




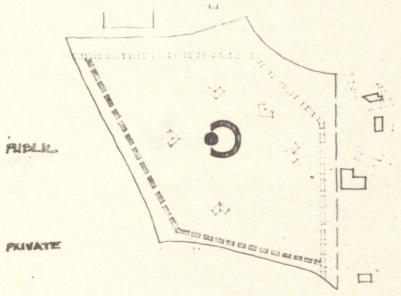




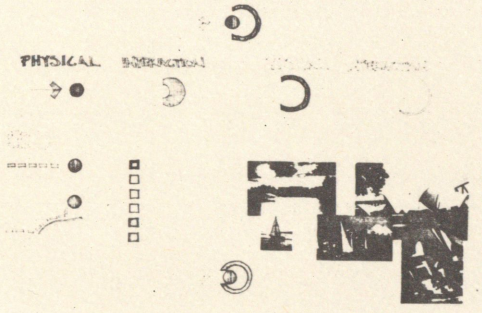

▲ BUILDING GOAL

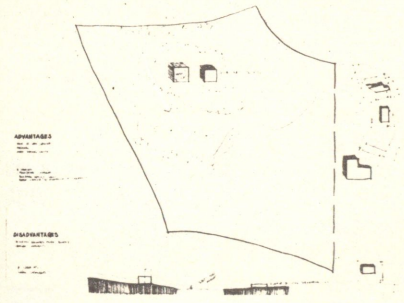


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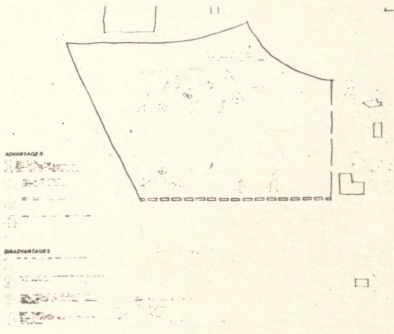



▲ SITE EDGES

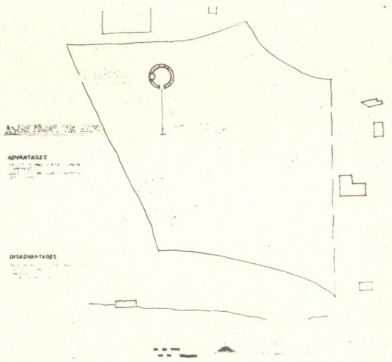


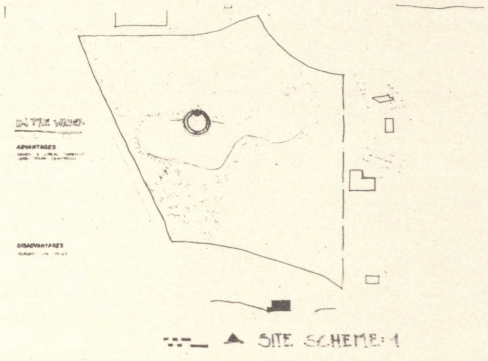



▲ SCHEME: VOLUME-1/8

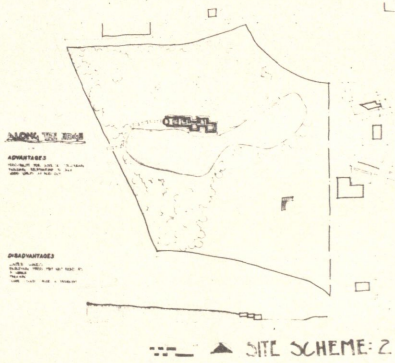


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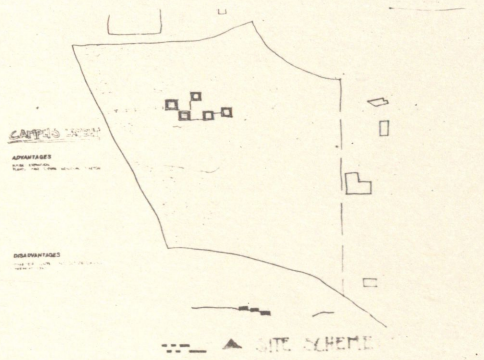


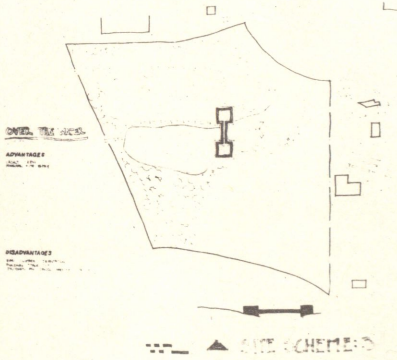


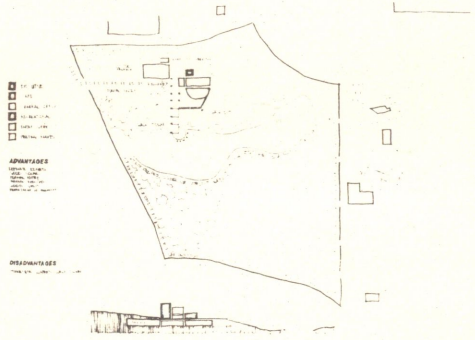
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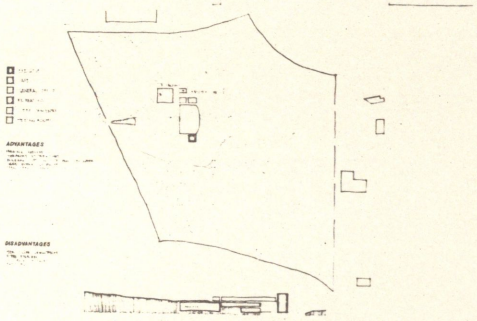
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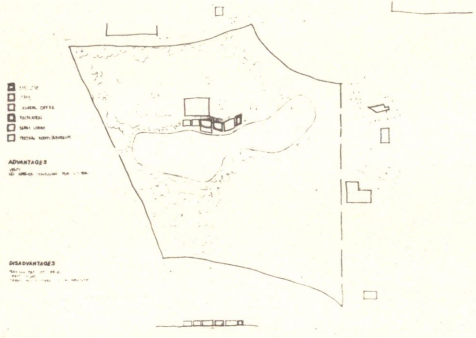




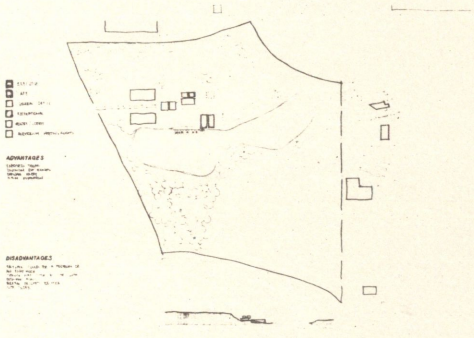
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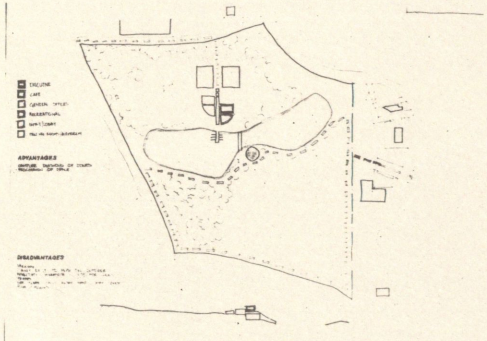
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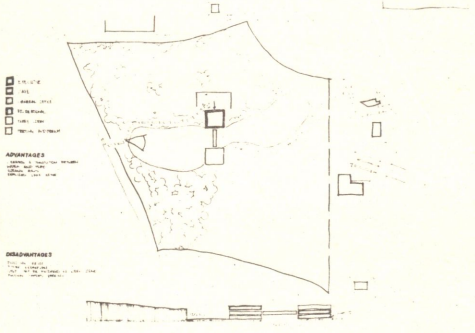
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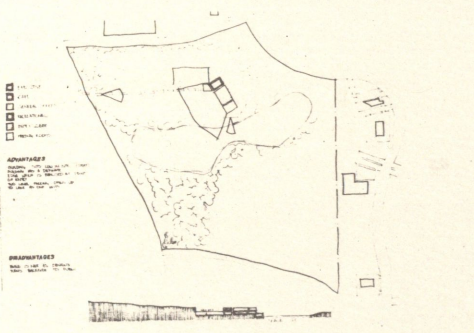
▲ SCHEME:6 CAMPUS PLAN



▲ SCHEME:7



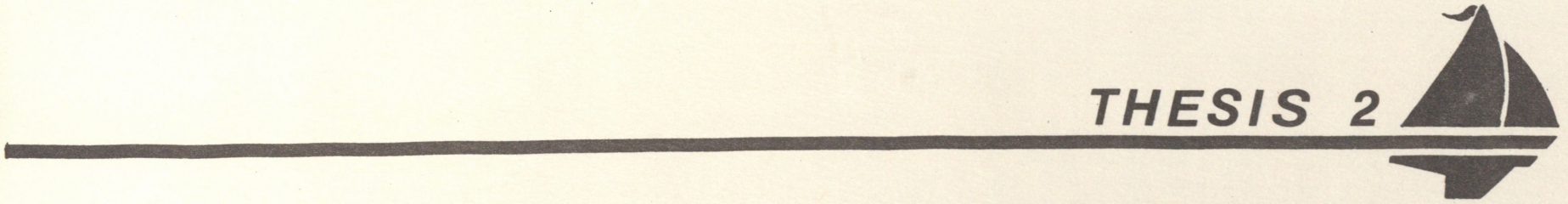
▲ SCHEME:



▲ SCHEME:6 VIEW ORIENTATED

and what is good Phaedrus
and what is not good -
Need we ask anyone to tell us
these things?

Robert M. Pirsig
Zen and the Art of
Motorcycle Maintenance



FOOTNOTES

[1]Elinor Selame and Joe Selame, Developing a Corporate Identity (New York: Chain Store Publishing, 1975) p. 1.

[2]Ibid.

[3]Ibid., p. 4.

[4]Roger Yee and Karen Gustafson, Corporate Design (New York: Interior Design Books, 1983) p. 16.

[5]Ibid.

[6]Ibid., p. 20.

[7]Geoffrey Broadbent, Richard Bunt, and Charles Jencks, Representation and Architecture (Silver Spring, Maryland: Information Dynamics, Inc., 1982) p. 74.

[8]Yee, Corporate Design, p. 138.

[9]Broadbent, Representation and Architecture, p. 77.

[10]Ibid., p. 44.

[11]Ibid., p. 45.

[12]Yee, Corporate Design, p. 36.

[13]Ibid.

FOOTNOTES continued

[14]Donald Canty, "Evaluation: The Wonders and the Workings of Saarinen's Deere and Co. Headquarters," AIA Journal, August 1976, p. 18-21.

[15]Bryant Putnam Gould, Planning the Corporate Headquarters (New York: John Wiley and Sons, Inc., 1983) p. 74.

[16]Alvin E. Palmer and Susan M. Lewis, Planning the Office Landscape (New York: McGraw-Hill Book Company, 1977) p. 140.

ILLUSTRATIONS

1. Monadock Building
   American Architecture and Urbanism.
   Vincent Scully, p. 107.

2. Chrysler Building
   The Architecture of New York City.
   Donald Reynolds, p. 236.

3. Empire State Building
   The Architecture of New York City.
   Donald Reynolds, p. 243.

4. John Deere
   GA Document #9. p. 22.

5. Michael Graves Building
   Architecture: Form, Space, and Order.
   Francis Ching, p. 61.

6. Federal Reserve Building
   Pocket Architecture.

7. Seagram Building
   Architecture: Form, Space and Order.
   Francis Ching, p. 29.

8. Best Foods
   Bizarre Architecture.
   Charles Jencks, p. 33.

9. General Foods Headquarters
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